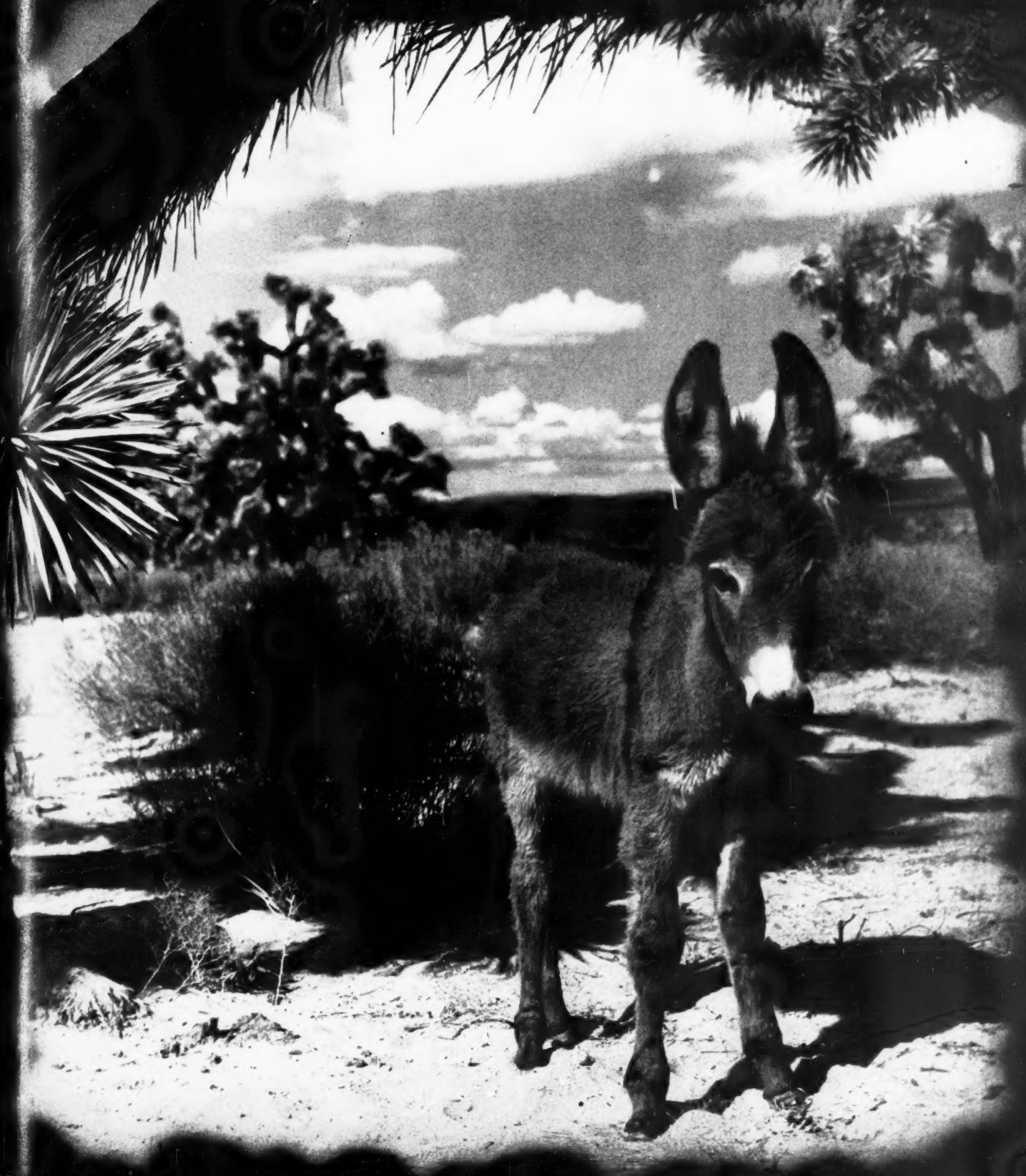


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JANUARY, 1940

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DESERT Calendar

JAN. 1 New Year dances at various New Mexico pueblos.

1 El Paso, Texas celebrates first big pageant publicizing Coronado Cuarto Centennial at Sun Bowl.

3 Color photography in the Arizona desert, lecture by Natt N. Dodge, park naturalist, Southwest national monuments, at Arizona museum, Phoenix.

4 Meeting of Mineralogical Society of Arizona, Arizona museum.

10 "A Naturalist's Five Chapter Story of Zion Canyon," lecture by M. V. Walker, park naturalist, Zion National Park, at Arizona museum.

12-14 International Four-States Highway convention at Las Vegas, Nevada.

12-15 First of two 1940 buffalo hunts in Houserock valley, Arizona.

13-14 Sierra club to camp at Coolidge springs and explore Rainbow Rock area for Indian caves and village sites, desert gems, fossil beds. Leaders: W. E. (Andy) Andrews, Dr. Marko Petinak, Los Angeles.

13-14 Anza exploration trip scheduled by Riverside chapter, Sierra club. Leader: Delphin B. Difani.

13-19 Western Mineralogical Exposition, chamber of commerce building, Los Angeles. Sponsored by Southern California mineralogical groups and the Engineers club. Dr. John Herman, president L. A. Mineralogical society and Engineers club.

17 Lecture: Venomous effect of scorpions, Arizona museum, by Dr. H. L. Stahnke of Mesa, Arizona.

18 Unusual Arizona minerals to be discussed by Dr. F. W. Galbraith, department of geology and mineralogy, university of Arizona, at Arizona museum.

23 Indian Buffalo dance at San Ildefonso pueblo, New Mexico.

27-28 Sierra club will take the rough 10-mile hike up Car canyon in the Santa Rosa mountains. Leaders: Dr. Bernard McMahan, Mr. and Mrs. Russell Hubbard, Los Angeles.

28-29 Third annual Palm Springs rodeo, Palm Springs Field club. Winter sports continuous at Flagstaff, Arizona. Ed. Grosbeck, director.



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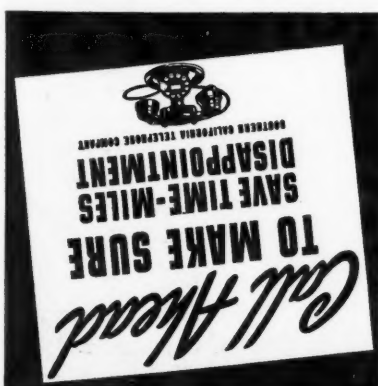
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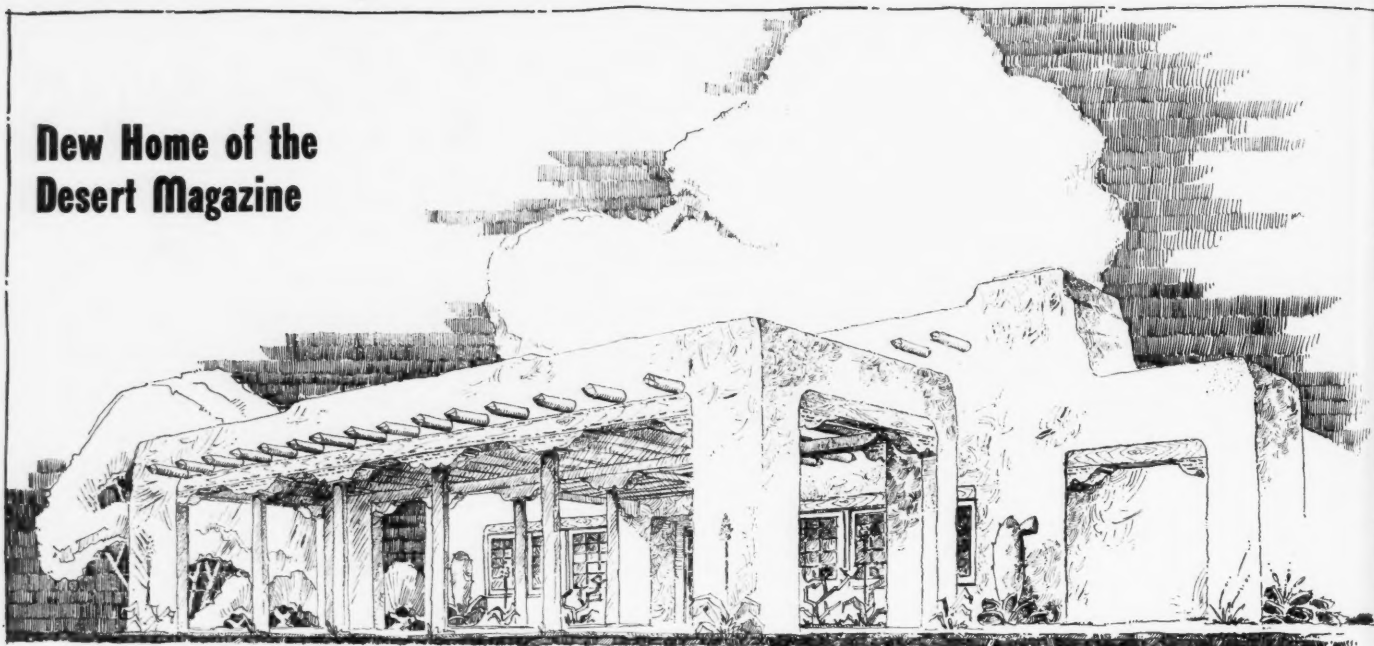
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New Home of the Desert Magazine



"Friend or Stranger--You are Welcome Here"

The cacti are not planted yet, and it will be some time before the flowers are blossoming in the patio—but the Desert Magazine's new home, shown in the artist's sketch above, is nearly ready to be occupied as this number of the magazine goes to press.

For architectural motif, the Desert Magazine went to the first citizens of record in the American desert—the Pueblo tribesmen of the Southwest. Of course modern architects have added a few frills—but the ancients furnished the original design; and it is a very substantial structure.

The building is 48x80 with 10-foot parking between the front wall and the sidewalk arcade. It will house both the offices and printing plant of the Desert Magazine—and there will be a nook in the front room with reading table and comfortable chairs for visitors.

Portions of the wall and floor space in the office will be devoted to an exhibit of desert arts and crafts, both ancient and modern, and to a mineral display. This collection is to be added gradually as specimens of

more than ordinary interest become available. A mural by John Hilton is to occupy a conspicuous panel in the office and exhibit room.

Design for the building was prepared by T. Franklin Holifield of Townes & Funk, architects of Albuquerque and Amarillo, and by Martin brothers of Brawley, California. Fred C. Smith of El Centro was general contractor. Nevada-California corporation designed the electrical installation and the Sones Lumber company of El Centro was electrical contractor. The cooling system is being installed by James Barnes of Calexico, California.

This will be the workshop of the Desert Magazine—a busy workshop—but not too busy to exchange a friendly word of greeting with all Desert Magazine readers who may pass this way.

On the door will be the legend—"Friend or Stranger—You are Welcome Here." And that is your invitation to get better acquainted with the Desert Magazine and its staff.

Prizes to Amateur Photographers

Each month the Desert Magazine offers two cash prizes for the best camera pictures submitted by amateur photographers. The first award is \$5.00 and the second \$3.00.

Pictures are limited to desert subjects, but there is no restriction as to the residence of the photographer. Entries may include Indian pictures, rock formations, flowers and wild animals, canyons, trees, water holes—in fact anything that belongs to the desert country.

Following are the rules governing the photographic contest:

1—Pictures submitted in the January contest must be received at the Desert Magazine office by January 20.

2—Not more than four prints may be submitted by one person in one month.

3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

4—Prints must be in black and white, 2 1/4 x 3 1/4 or larger, and must be on glossy paper.

Pictures will be returned only when postage is enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the January contest will be announced and the pictures published in the March number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.

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MAGAZINE



Patriot of the Pueblos

By HOPE E. GILBERT

As a warrior, Po-pé was a crafty and courageous leader. He broke the power of Spain in New Mexico and restored the land to the Pueblo Indians. But as a peace-time ruler he fell into the usual pitfalls that await the power-drunk dictator, and died in ignominy. Here is the story of a revolt that occurred 260 years ago — and changed the whole course of Southwestern history.

“**C**AUDI . . . Tilini . . . Tleume . . .” the voice of Po-pé the medicine man spoke. Suddenly in the close darkness of the kiva a flaming figure appeared, then another and another. Tense bodies remained motionless as Po-pé addressed the three spirits. In sepulchral tones the spirits replied, counseling extermination of the Spaniards and their God.

Like all successful leaders Po-pé was a master showman. He had learned from a nomad tribe of the incandescent quality of phosphorus when smeared over the body. With this knowledge he was able to play upon the superstitious fear and hatred of his fellow Indians. That night

Present day picture of Taos where Po-pé planned the Indian revolt of 1680. Photo courtesy Santa Fe railroad.

in the sacred kiva at Taos Po-pé played his master stroke. His dramatic conjuring of the fiery fiends captured the imagination of the last wavering Indian and won the almost fanatical support of the pueblos in his relentless plan for the most widespread, thorough-going Indian uprising in the annals of North America.

Never until Po-pé's time had the pueblos united in a common effort. They were in general a peace-loving people living in their fortress-like community dwellings built as a defense against marauding nomads, engaging in agriculture, and averse to entangling alliances. The common ground for union was the pueblo's hatred of the Spaniards who had established the

province of New Mexico late in the sixteenth century. Economically they were compelled to pay tribute in labor and products. Their chief grievance, however, seems to have been religious. The friars had zealously labored to eradicate all heathen rites and beliefs. Here the pueblos were touched in their most sensitive spot. In their dependence upon the rain gods for material existence their whole life was centered in their religious concepts of nature. They were willing to accept the Christian deity in their pantheon of rain-givers, but never to the exclusion of their traditional gods. In this the padres met a stone wall of secret opposition. As long as the religious received ample supplies from the vice-regal coffers in Mexico City the pueblos nominally accepted Christian teachings, but as the years passed and drought and pestilence visited them as in the days before the white priests, and as the padres' stores of supplies became depleted during the lean years from 1670-1680, the tide of opposition to the Spanish intruder grew daily stronger.

Captured by Spaniards

Prior to 1680 there were sporadic but unsuccessful attempts to throw off the Spanish yoke. Po-pé was one of the offenders in 1675. With 46 other Indians Po-pé was captured by the Spanish and found guilty of "various murders, idolatry and evil-doing." Four of the captives were hanged, a number were freed with rebukes, and the rest, including Po-pé, were sentenced to flogging and imprisonment. A group of Tewa warriors went to their kinsmen's aid. They unceremoniously entered Governor Treviño's quarters in Santa Fe, presented their offerings of chickens, beans, tobacco and deerskins, demanded and secured the release of their medicine men. In their treatment of Po-pé the Spaniards had made the mistake of lighting the flame of personal grievance in the heart of an astute and dangerous foe. From that moment Po-pé relentlessly planned the complete extermination of Spanish power in the Southwest.

Po-pé was a native of San Juan pueblo, one of a cluster of Tewa villages on the Rio Grande, 25 miles northwest of Santa Fe. Constantly held suspect by the Spanish authorities, however, he fled to Taos, northernmost pueblo, where he gained hearty cooperation in perfecting his plan.

Po-pé undertook the difficult task of uniting 20,000 Indians inhabiting some 60 pueblos scattered over a territory nearly as large as New England and separated by the barrier of four distinct languages and several dialects. To all those who accepted his leadership Po-pé painted a glowing picture of freedom from oppression, of prosperity and the renewed favor of their native gods. He

promised the warriors a wife for each Spaniard killed, and threatened death to those who did not join. He carried out his threat by killing his son-in-law, the governor of San Juan pueblo, for suspected friendliness to the Spaniards. Thus through his indomitable will and clever combination of subterfuge, threats and appeals Po-pé united the pueblo country.

Date Set For Revolt

The date finally agreed upon for simultaneous uprising was August 11, 1680. Po-pé effected unity of action by sending runners, bearing knotted cords signifying the date, across miles of desert and mountain to each pueblo. From Taos runners went to Pecos on the eastern frontier, to Acoma, Zuni and the Hopi country to the far west, and southward to the villages extending down the Rio Grande. The Piro towns to the extreme south, on the trail to Mexico, were the only ones not invited to join.

Two days before the date for uprising Po-pé's plans threatened to collapse through defection of several chiefs and capture of two runners by the Spaniards. The *principales* of Tesuque, Po-pé's faithful henchmen, acted in the emergency. They speedily dispatched fresh runners with instructions to rise immediately.

August 10th was a day of horror. In the massacre that followed 400 Spaniards lost their lives. Twenty-one Franciscan friars met martyrdom, some of them in hideous manner. At one pueblo the padre was bound naked astride a pig and scourged through the village till he died. The settlers of the northern area who were able to escape the maddened savages fled to Santa Fe where, with the townspeople, they took refuge in the

casas reales, the low thick-walled structure built about a hollow square comprising the Governor's palace and soldiers' barracks. In these cramped quarters were packed a thousand refugees with their livestock and the remnants of their possessions.

Vengeance having been carried out with frightful thoroughness in the outlying districts, the warriors now hastened from every direction to make their final attack upon Santa Fe. Before the arrival of Po-pé and the northern contingent from Taos, one of Po-pé's lieutenants offered the Spanish governor the choice of a red or a white cross. The white cross would signify withdrawal from the province by the Spaniards, the red cross war to the finish. Governor Otermín refused to consider retreat. He urged the rebels to return to their homes, with promise of general pardon. The Indians, however, were in a bloodthirsty mood. They received Otermín's choice of the red cross with shouts, ringing of bells and the burning of San Miguel chapel.

Water Supply Cut off

Several days of vigorous but indecisive encounters ensued between the Spaniards and Indians. Then by a clever stratagem the pueblos gained a signal triumph; they succeeded in cutting off the sole water supply from the Rio Santa Fe to the government buildings which harbored the beleaguered colonists. After the Spaniards had been two days without water jubilant Indians surrounded the *casas reales* chanting their victory song and shouting, "God the Father of the Spaniards and Mary their Mother are dead! Our gods alone live!"

The colonists heroically refused to con-



Ruins of Jemez church, destroyed in the rebellion led by Po-pé. Photo courtesy Museum of New Mexico.

cede defeat. Determining to make a last desperate effort, the small Spanish force early the next morning took the natives completely by surprise. Rushing them in a furious onslaught with their horses, the Spaniards put to flight the main body of natives, killing 300 and capturing 47. The 47 captives were questioned concerning the revolt and then shot in the plaza.

Despite this victory, the plight of the Spaniards was hopeless. On the morning of August 21, eleven days after the rebel outbreak, the sorry procession of soldiers, priests, colonists and livestock abandoned the villa for the south. Joining with those fleeing from the southern pueblo area, the refugees from Santa Fe marched almost 400 miles to a small Spanish mission near Paso del Norte and there formed the main nucleus of the permanent settlement of El Paso.

Po-pé had failed to exterminate the white invaders but he had forced them to withdraw from the pueblo country. The retreat of the last Spanish survivor was a signal for wild celebration throughout the pueblo area. With fiendish glee the victors obliterated every vestige of Spanish culture, befouling, burning or burying the instruments of Christian worship, and destroying the churches and conventos. In accord with Po-pé's orders the natives scrubbed themselves with amole and bathed in the streams to counteract the effects of baptism. They gave up their Christian names and took new wives. They rebuilt their kivas, erected altars to their own gods and performed their ancient dances. They were forbidden under pain of punishment to use the Spanish language or to speak the names of Jesus, Mary or the saints. In all things but one they obeyed Po-pé; they refused to burn the seeds and food products introduced by the Spaniards.

Fall of Dictator

Although reared in the democratic traditions of his people Po-pé affected the pose of exalted liberator. Dressed in full Indian regalia with a bull's horn on his forehead, mounted on a shiny black mule and attended by a retinue of natives he went from pueblo to pueblo, exacting obedience and tribute. He sprinkled the natives with corn meal as a form of blessing and was everywhere accorded the honors formerly given the Spanish governor and the father custodian.

Actuated at first by an undoubtedly sincere desire to free his people Po-pé fell into the usual pitfalls of a dictator. His so-called supernatural guidance degenerated into self-aggrandizement. There was a revulsion of feeling against him and his unfulfilled campaign promises. Pueblo turned against pueblo. Internecine strife followed the short-lived triumph over the Spaniards. Po-pé's personal rule lasted little more than a year after the



Santiago Naranjo—descendant of kinsmen of Po-pé. From portrait by Julius Rolshoven. Photograph courtesy Museum of New Mexico.

rebellion. Seven years later he staged a short come-back, but death soon followed.

For 12 years the pueblos held out against all attempts by Spanish forces to reenter the northern province. By 1692, however, the Indians were too weakened and disunited by civil war to prevent the entrada of Don Diego de Vargas into Santa Fe. Four years of intermittent war followed before the pueblos sued for final peace. They had learned a costly lesson. Never again were they to unite under a native dictator.

Po-pé succeeded in forcing the withdrawal of Spain from New Mexico at a period when France through the activities of La Salle was threatening encroachment on Spanish territory. Had La Salle's attempted settlement of the Texas coast been a success and had he succeeded in allying the pueblos with France we can not but speculate how different might have been the subsequent chapters of the story of our Southwest.

The stamp of Po-pé is upon the pueblos today. His influence was significant in

determining the present extent and character of pueblo culture. Due to the rebellion a greater degree of tolerance toward the old pagan rites was adopted by the Spaniards following reconquest of the province. The result is that today we may see many of the traditional dances and ceremonies of the pueblos in virtually the same form as in the days of the conquistadores.

• • •

SCHOOL-TRAINED INDIANS RETURN TO RESERVATION

Indians educated in Uncle Sam's industrial schools and unable to find work are going back to the reservations. Dr. W. W. Beatty, Indian bureau director of education, declared at the Arizona state university. Red men taught how to farm are succeeding when they return to their homes, he said. Government plan now is to give Indians basic education, he asserted, so that they can support themselves if they decide to "remain and exploit natural resources of the reservation."



Frank Dunn—and two of the "wild" animals he dug from the desert sands.

Big Game Hunter --With a Spade

Like many other tenderfeet, Frank Dunn thought the desert was a place for lizards and fools—until, quite by accident, he discovered the perfect replica of an antelope in a tangled clump of dead roots. And that was the beginning of a hobby that—well, here's Frank's own story of what happened.

By FRANK DUNN

Photos by Lansing Brown and Edwin Teale

FOR 12 years I have been digging up kangaroos, monkeys, ostriches, elephants, giraffes, dinosaurs and men in our southwestern deserts. And my spade work gives me more fun than anything I have ever done.

Before you accuse me of being a candidate for a lunacy commission, let me explain that all these specimens are found in shrub roots, replicas of almost every animal that ever roamed the face of the earth.

The hunter of these freak natural growths need take nothing more in the way of equipment than a keen imagination, lots of good old prospector's patience and a pair of ordinary mechanic's pliers. A strong tug will bring up any likely dead shrub for examination of its roots.

My discovery of these plant animals or animal plants came about by accident while I was sojourning at the Willard George ranch nearly 50 miles northeast of Boulder dam. Nestling there at the foot of Mt. Charleston, this ranch is nearly at the geographical center of the nation's vast sand lot.

I had six days to fritter away here. What would I do to pass the time?

Las Vegas was the nearest town, 25 miles away over roads no one would travel for the fun of it — no habitation between the ranch and town except shabby

dusty old Arden. Arden was once a prosperous gypsum mining camp—but now is little more than a withering ghost of its more glamorous self.

Here all around was plant life new and strange and it suddenly occurred to me that I might find that botanical bonanza of my dreams.

A friend of mine employed by a large pipe manufacturer in New York had frequently discussed with me the possibilities of finding a domestic substitute for brier, one which would meet all the exacting requirements of the pipe manufacturer—that was my botanical bonanza. I was to do the hunting and he was to make the tests in his laboratory.

Surely one of these many tough shrubs of the desert would lend itself to this purpose. It was worth a try, anyway, even if it yielded nothing.

And so, armed with ax and shovel, I started to search.

On the afternoon of the second day while digging up a new specimen I was startled by an unusual formation in its roots. There was the perfect head of an antelope with proportionate sleek body and neck, all very obvious in a haphazard tangle of shoots and branches. I cut off those shoots not needed in the anatomy of the antelope and finally shortened his legs. The result was a piece of sculpture by nature which really was remarkable.

I packed the thing back to the cabin and put it on the mantel. It seemed to grow more real and lifelike as it stood there on its own legs. It fascinated me more every time I looked at it.

If there was one animal on this desert surely there must be more, I thought. And so there were. The next afternoon I "bagged" an elephant which would have been complete except that he lacked one tusk. Of course he could have lost his tusk in a battle.

Well, the pipe material search paled into the background as I pressed on for new members for my horticultural menagerie. Two days passed without yielding anything worthwhile. Then my reward was an excellent likeness of a seal, number three in the collection.

Next came the snake—not just a simple winding piece of root but one which coiled perfectly and finished off with a protruding head in realistic striking pose.

I now had four pieces, a good nucleus around which to build a priceless collection of nature's art treasures. I cherished these wood carvings. Here were sculptures by the Maker's own hand which defy the most skillful craftsman. It almost seemed to me as though these miniatures had been His working models for the real live animals and had been discarded there on the desert at the completion of His great creation.

My six days of "exile" ended too soon

and I carefully packed the four precious root animals along with my toothbrush and returned to Los Angeles.

Like many easterners I had felt no kindness for the desert. In my periodic trips across the wide expanse of arid America I had traveled mostly at night, lingering only long enough to service myself and my vehicle. But those six days in the Nevada desert had brought a new viewpoint. Since then I visit the desert at every opportunity. "Desert rat" is what my friends call me and I would be proud to deserve the name.

Twelve years have passed and the search for the brier substitute is just a pipe dream but my fascinating hobby has developed to the point where only those growths which are almost faultless are given place in my freak zoo. The spark of life and the ability to stand up on their own feet are the requisites for all prospective candidates. Thirty-eight different pieces now grace the special individual shelves of my den in Long Island, covering the entire surface of one wall. On my annual trip to the coast they are packed in a special compartment case and "toted" along for display as I travel. They have already been shown in several dozen of the country's leading stores.

Greasewood, manzanita, the treacherous catsclaw acacia, and juniper are the principal contributors, along with the less prominent ginseng and ironwood. Sage, the desert patriarch, is conspicuous by its absence, as is the shallow thread rooted cactus.

One item is the perfect likeness of a stretching man. He is the keeper of my zoo. Incidentally, this is the prize piece of them all for he is minutely detailed and always draws a flood of "ohs" and "ahs" whenever he is displayed. Many famous art collectors, including John Hix of "Strange as it Seems" fame and "Believe it or Not" Bob Ripley have sought to buy the "Ho-hum man" as they have called him in their cartoon picturizations of character. The herb Ginseng to which this piece belongs is used in the orient for brewing a curative tea. It is also mentioned in American Indian folklore as being a sacred plant.

I have explored the flora of 25 different states throughout the country, but have found my animals only in the desert states of the southwest, particularly California, Nevada and Arizona, and more particularly in that region at the foothills of the sandstone mountain range in southern Nevada.

My favorite hunting ground is still the desert region near the Willard George ranch where I found my first specimens. This spot is especially interesting because the beautiful oasis created here is a striking example of how the desert can be transformed by water plus the vision of a builder. Cherry, peach, pear, apple, fig and nectarine trees flourish in the cr-

chard, amid a lavish display of floral beauty. A huge reservoir supplies an ample supply of water.

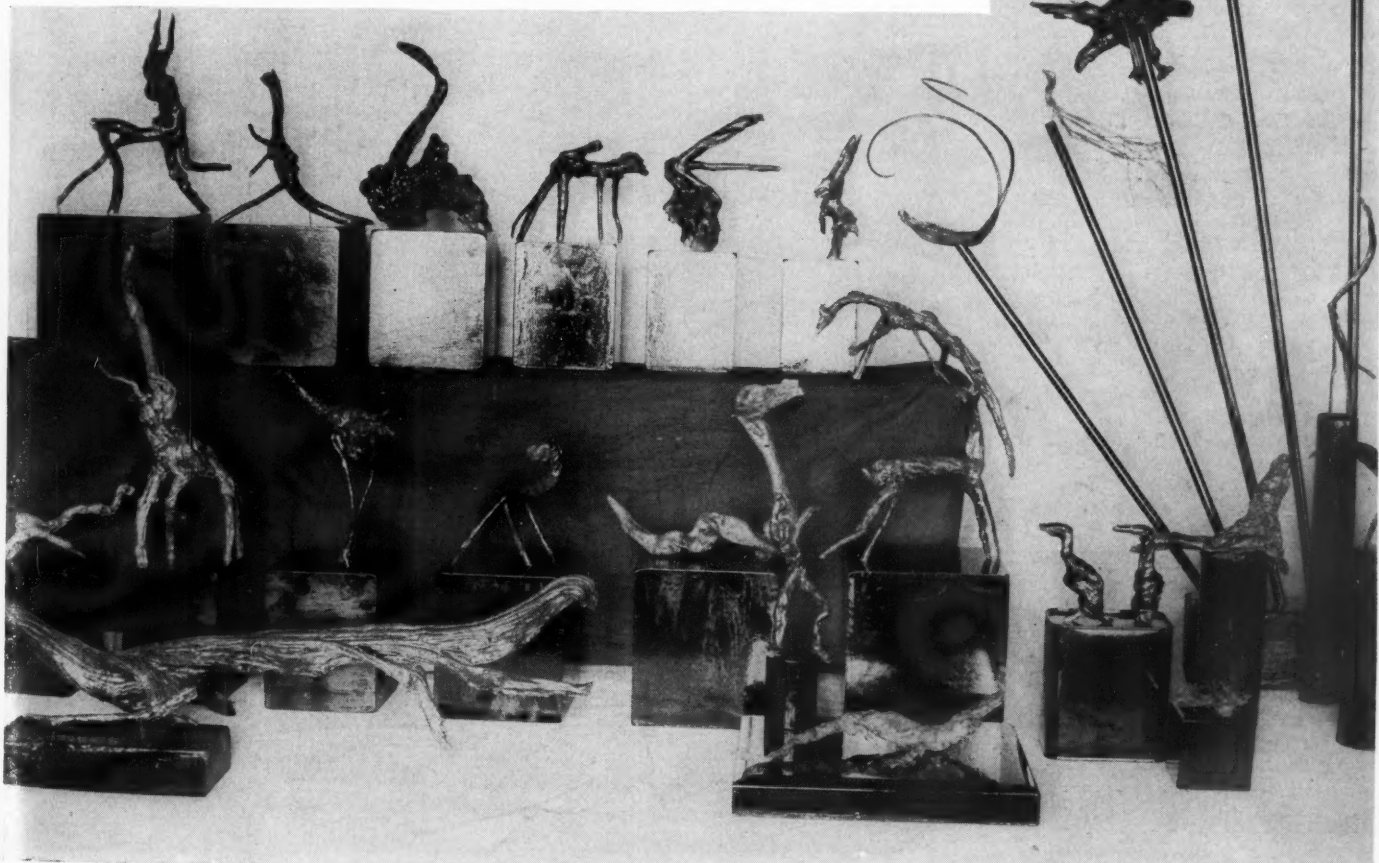
Most recent acquisitions to my collection were the kangaroo and the dinosaur found during a three-week sojourn in Palm Springs last winter. That region to the south and west was productive of a half dozen good numbers but of those only two had enough "it" to merit their keep.

In a trek to the banks of the Colorado river on the floor of the Grand Canyon I brought back with me an unusual likeness of a crouching bird. This bird will always be a souvenir of a foot trek too gruelling for a city softie. It had rained for three days and three nights before our waterless and foodless invasion of the famous gorge, and the going was tough.

The "ho-hum man" was found within 300 yards of Furnace creek inn in Death valley. Five pieces have had their origin somewhere in Death valley.

Monetary gains I might have derived from that pipe dream had the search been successful, are certainly more than compensated by the joy this hobby has brought.

Here is one corner of Dunn's private "zoo." Skillful mounting adds to the realistic impression of this unusual collection.





Pinon Peak

By PHIL REMINGTON
El Centro, California

First prize winning picture in the November amateur contest conducted by the Desert Magazine. Taken with Eastman 620 Special, f 4.5 lens, October 9 at 4 p. m. at f16, 1/25 second, A filter, Super XX film.

Juan and Tonto

By Ivan B. Mardis
Tucson, Arizona

Awarded second prize in the November photographic contest of the Desert Magazine. Taken with Voightlander Avus at sundown November 1, f16 at 1/100 sec., K2 filter, Super XX film.

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Special Merit

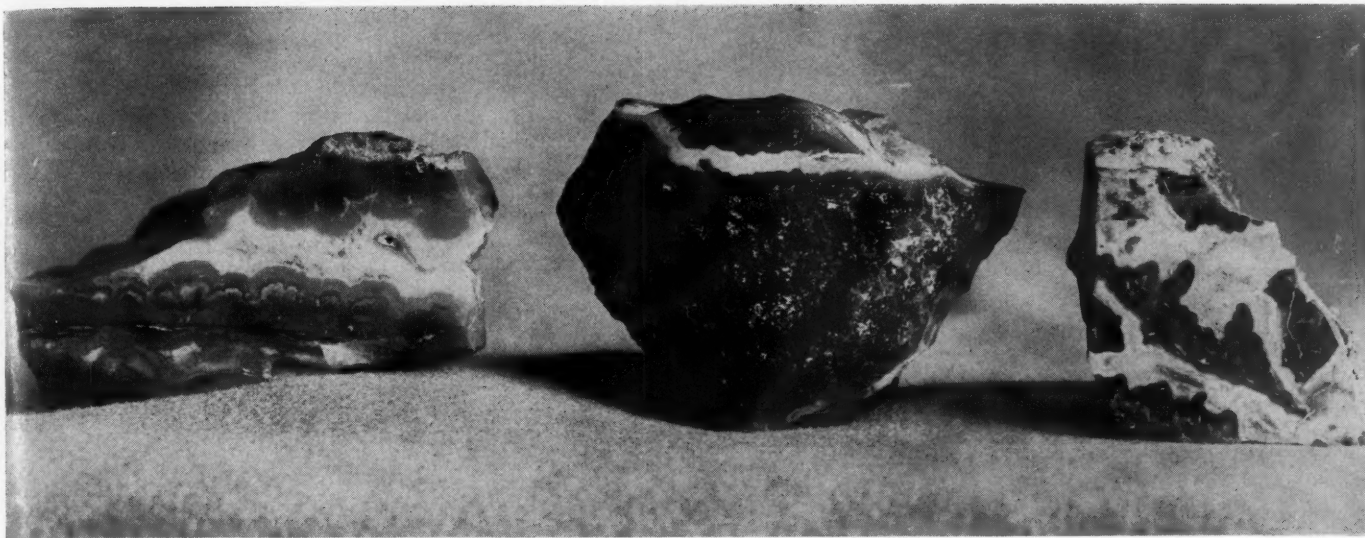
In addition to the prize winning pictures, the following entries received favorable comment from the judges:

"Boulder Dam" by H. T. McCulloh, Pasadena, California.

"Sunrise in Borego Palm Canyon" by L. B. Dixon, Del Mar, California.

"Cholla Cactus" by J. L. Hafen, Redlands, California.





Three polished specimens of carnelian and white agate found in the Bullion mountain area. The center stone shows the banded type of occurrence known as sardonyx.

Gem Trail in the Bullion Mountains

By JOHN W. HILTON

With Frank Bagley, veteran of the Twentynine Palms area as guide, and Ed. Ainsworth of the Los Angeles Times as one of his companions, John Hilton recently explored a new gem and mineral zone in the Twentynine Palms area—several miles from the field mapped in the December, 1938 issue of the Desert Magazine. Beautiful specimens of carnelian were found here, some of them of the banded type known as sardonyx. This field will be of special interest to collectors who have their own cutting and polishing equipment.

"MEET us at 9:30 Saturday morning in front of the Twentynine Palms postoffice." The message came to me from Ed. Ainsworth of the Los Angeles Times.

I had been trying for months to get him to accompany me on a geode hunt in one of the gem and mineral fields in the desert region of Southern California.

There are several kinds of rock collectors, and Ed. belongs to that branch of the general rockhound fraternity interested in pretty pebbles and boulders for the garden. His rock garden in one of the suburbs of Los Angeles is his prize hobby.

I reached Twentynine Palms ahead of schedule and promptly looked up my photographer friend, Harlow Jones. Together we went to see Frank Bagley. For years I have heard Bagley mentioned as one of the best posted men at Twentynine Palms in the geography of that region, and this was my first opportunity to become acquainted with him.

On the wall of his office is a giant map of the surrounding desert. It showed the Joshua Tree national monument in every detail, and the elevations and contours and trails of the whole region. Much of the detail had been penciled in

by Bagley himself, and appears on no other map.

"If you are interested in gem stones," said Frank, "perhaps you would like to visit a spot we found a few days ago in the Bullion mountains." Then he told us about extensive deposits of vari-colored jaspers in a side canyon not far from the trail that leads from Twentynine Palms to Ludlow. There are ledges of bright-colored gem rock here, he said, that would bring joy to the heart of any collector.

As I was getting the exact instructions from Bagley for reaching this new field, the Ainsworth party drove up, their car loaded with sleeping bags, grub boxes, canteens, prospector's hammers, and the other paraphernalia that go with an outing trip on the desert.

A veteran of the desert trails reacts to a camping outfit like an artist to a gorgeous sunset—and I could see a gleam in Bagley's eyes as he excused himself to return to the store. A moment later he appeared with a broad smile on his face and announced he "guessed he could get away for a few hours" himself.

That was good news for us. All the verbal instructions in the world are not

as helpful as the guidance of a man who has been over the ground and knows the route. Bagley is a thorough student of the desert and an interesting companion, so his decision to go with us was doubly welcome.

Our caravan glided over the smooth floor of the dry lake beds north of Twentynine Palms and then we entered the area where the trail has both rocks and sand to contend with. However, it is not a bad road as desert roads go.

We were heading in the general direction of Rainbow canyon, described in the December '38 number of the Desert Magazine, but long before we reached that colorful spot Bagley turned sharply to the right and struck off toward what appeared to be the blank face of the Bullion range.

Rounding a curve at the first small hill we immediately entered a large canyon which appeared to penetrate deep into the range. Bagley explained that the trail we were on crossed through the entire range—but he recommended the trip only for hardy desert drivers.

Little Shiela Ainsworth was the first to notice the fine pieces of jasper and agate float that began to appear along

the roadside—and soon we were all out of the cars gathering specimens.

I have often been impressed by the pleasure children find in hunting minerals. Even youngest ones soon learn to identify the rocks and their sharp eyes often discover prize specimens overlooked by their elders. Knowing the eagerness with which the youngsters comb the hillsides for rocks, I have always been out of sympathy with parents who insist on leaving the children home when they go rock hunting.

Actually the desert in winter is a child's paradise not only from the standpoint of enjoyment, but for the health they derive from fresh air and sunshine and physical exercise. Such trips may lead them into a fine hobby—and prepare them for that future day when the human being without a hobby will be completely lost in a world where reduced hours of work provide more leisure time.

Soon our guide was urging us to continue our trip. "This is only the beginning," Bagley said. A little later we turned off the Ludlow trail and stopped at the entrance to a small bright-hued canyon. The sculpturing and coloring here were gorgeous—and my only regret is that the colored photos made by Harlow Jones that day could not be reproduced for Desert Magazine readers.

The base of the hill directly in front of the car was scattered with boulders of

red and brown jasper. Although these rocks were large in size and the color was fine, they are too pitted and porous to make good cutting material. Veins of the same material appeared higher up on the slope, some of them 18 inches wide.

On closer inspection of the hill we found many narrower seams of the same material. In some of them we found a fine assortment of good jaspers and agates, although some of these were disappointing because of calcite intrusions. The difference in the hardness of these minerals makes it impossible to produce a good polish.

Many interesting finds were made and it is inconceivable that anyone interested in minerals could spend a day here without securing specimens they would treasure for years. Of course it should be kept in mind that the real beauty of jasper is seldom disclosed until it has been on the polishing wheel.

After wandering over a considerable area, several of us returned to the cars and there on a low ridge at the left of our parking place we found the finest gem stones of the day. Protruding from the lava and scattered over the ground as float, were flat slabs of agate and carnelian excellent in both texture and color. The carnelian can be identified by its fine orange-red shading, and the fact that it is quite translucent when held before a

light. This distinguishes it from some of the jaspers in this field which have almost the same color, but are entirely opaque.

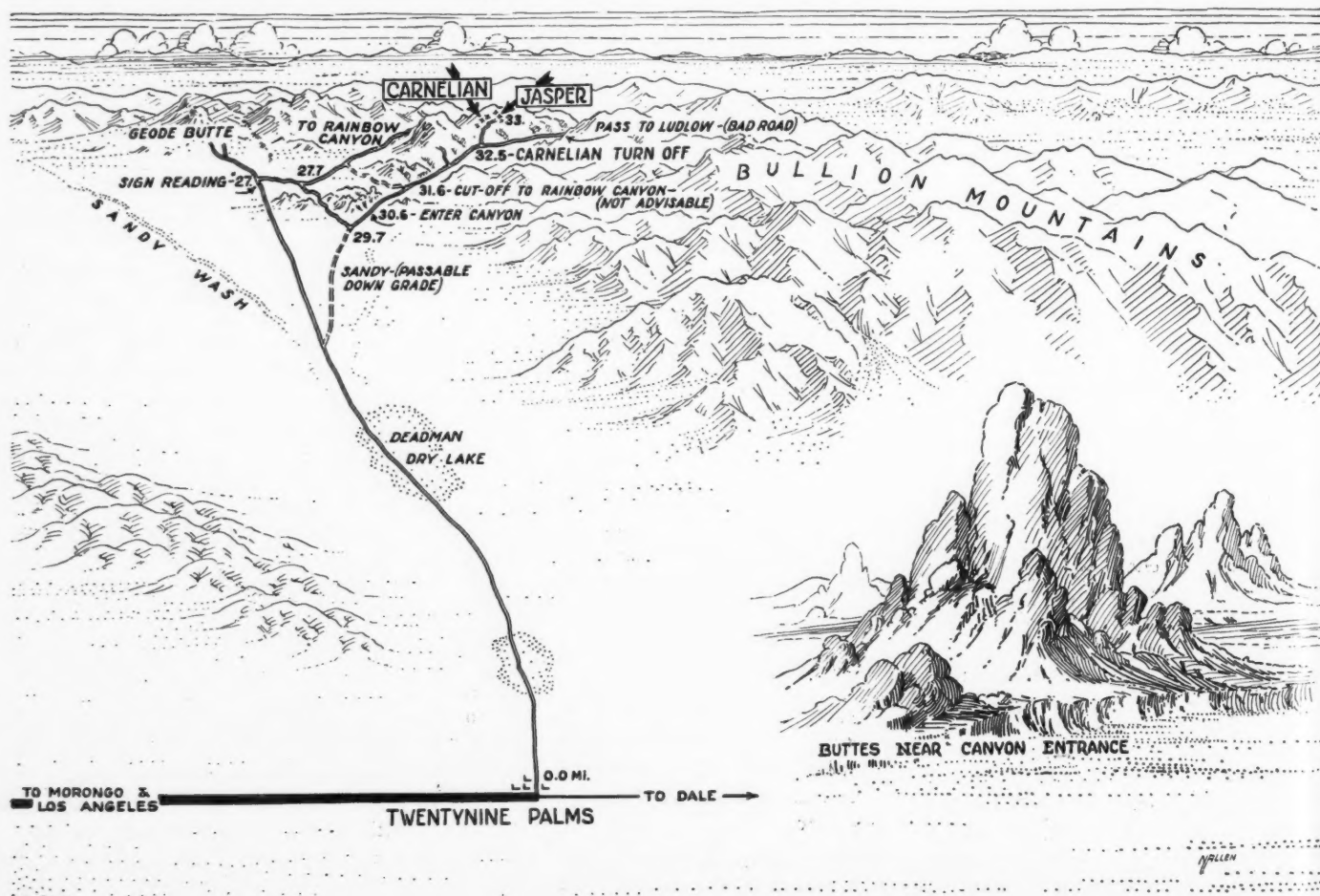
It takes some hunting and perhaps a little digging to obtain really fine samples of this gem, but one outstanding specimen is ample reward for a real collector.

The combinations of carnelian with clear or milky agate make a striking specimen and some of the patterns found here are really beautiful. The commonest type we encountered in the field was a band of white agate bordered on either side by a bright wavy band of carnelian.

Ainsworth was fortunate in finding two excellent specimens of bloodstone. These would compare favorably with the best grade from India. As no others were discovered it is difficult to say whether they were formed here or came as float from a deposit farther back in the range.

As we left the field for an overnight camp in the geode field the beauty of this spot was deeply impressed upon us. The lowering sun cast deep shadows and served to emphasize the natural sculpturing of the cliffs and crags about us.

Turning to the right at the mouth of the wash we again headed in the general direction of Rainbow canyon, but continued past its entrance over some steep dips to the original geode road marked



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Above—General picture of the area described in this story. Carnelian was found in the foreground, and jasper in the background.

Below—Snapshot of Hilton and his companions as they left their cars to gather specimens in the Bullion mountain field. Harlow Jones photos.

on the map in the December '38 issue of this magazine.

We found a neat sign erected by the citizens of Twentynine Palms which read "Geode Area." A little later we came to the camp of a family out in quest of some specimens. They had found a few geodes that afternoon and were staying over to continue their search in the morning.

This area has attracted many visitors during the past year, and while most of the specimens scattered on the surface of the ground within easy reach of the road have been gathered up, there are still specimens here for those who know how to hunt and where to dig for them.

Sooner or later a heavy cloudburst will visit this region, cutting away some of the surface layer of smooth weathered rock, and a new "crop" of gem specimens will be exposed. Such fields are seldom entirely exhausted as a source of supply, because the geodes generally extend to

some depth in the mother lava that is their matrix, and the forces of erosion are periodically bringing new specimens to the surface.

Harlow and I were unable to remain at the overnight camp with the Ainsworth party. As we returned along the road after dark we saw a campfire ahead. I recognized a tall figure silhouetted against the glow of the fire and a minute later was shaking hands with Arthur Eaton and members of the Imperial Valley Mineralogical society who had come here on a field trip.

Mrs. Eaton greeted us with two cups of steaming coffee and some homemade cake. Such is the hospitality of the desert among the real desert people who travel the unfrequented trails.

As we bounced along over the road toward Twentynine Palms that night, the thought kept recurring to me—"what a fine thing, that so many people, both

from the city and from the desert, can engage in this great outdoor hobby of rock collecting." It is one of the great gifts of the desert to humans who have access to the arid country.

Of course the most of those who go are only amateurs — but they have just as much fun as the experts. Even the amateurs know more about stones than the city neighbor Ed. Ainsworth told about in his "Along El Camino Real" column in the Times. As Ed. was starting on his trip this neighbor inquired "Just how do you cook a geode?"

Sez Hard Rock Shorty of ... Death Valley

By LON GARRISON

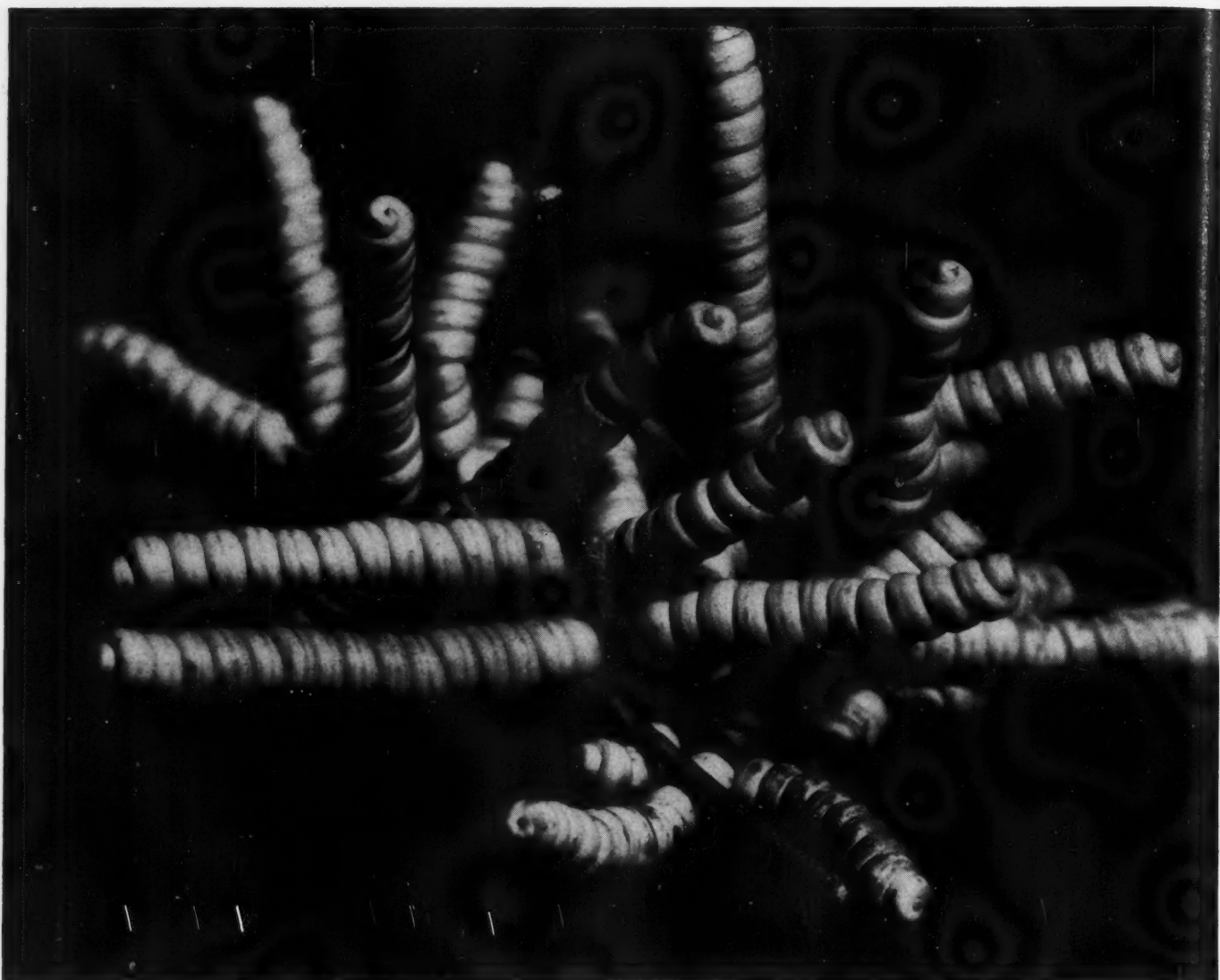


"Now I ain't sayin' this is gospel truth," began Hard Rock Shorty, "but my friend ol' Pisgah Bill told me about it an' I'd believe him lots o' times sooner'n I would a preacher."

Hard Rock turned his chair around, propped his feet on the rail of the store porch and went on with his adventure.

"We was talkin' about 'dobe mud an' how sticky it is, an' I told 'im about the Pilgrim that wandered into that little patch over on Gene Banks' place an' we had to cut his leg off to get 'im unstuck."

"'Shucks,' says Pisgah Bill 'That ain't nothin'. Why down to my ranch I got a whole field o' this 'dobe. Every time there's a rain storm it gets so durned sticky I don't dare to look at it or I can't look away. One day it was rainin' a little an' kind o' cloudy, an' this field was maybe a little extra sticky. All of a sudden the rain stopped an' the clouds busted an' the sun come out. A eagle just happened to be flyin' over there an' his shadder was on this field. Do you know, it was so sticky his shadder stuck, an' try all he could, the eagle couldn't budge—just hung up there. He stayed there 'til it dried off. I went out an' chopped his shadder loose, but—too late! By that time he'd plumb starved to death.'"



Screwbean Mesquite pods. Adelbert Bartlett photo.

Handy-Man for the Homesteader

By MARY BEAL

OL' MAN Mesquite! He's never won any prizes in the botanical exhibits. He is never beautiful, and seldom graceful. But when it comes to downright usefulness — there isn't a better citizen on the desert.

He never splurges in purple robes as does his neighbor the Smoke tree, nor has he the regal dignity of the native palm. He prefers the humble role of handy-man for all who need his services — and that takes in about every kind of an animal that lives on the desert, including man.

For the ancient tribesmen he supplied

food, shelter and firewood — and some of the aborigines picked the beans from his branches and then ground them in metates made from his hollowed trunk.

He was and still is a life-saver for many a homesteader and rancher in the arid region. He supplied the timbers for a cabin, the posts for the corral, yoke for the oxen, stools for the kitchen, a crib for the baby and an everready supply of firewood for winter evenings.

He has to have the tips of his roots in moist ground to live — but wherever that moisture is present, though it may be 50 or 60 feet below the surface, the mes-

Mesquite is neither ugly enough to be called exotic — nor colorful enough to be called beautiful. Consequently, the poets seldom write verses about it. But it is one of the most common trees that grow on the desert — also one of the most useful.

quite thrives and multiplies. Mesquite is found in the vicinity of every water hole, unless the soil is so impregnated with salt as to be sterile. The rodents store up the seeds for winter. Bees come for miles around to feed on the honey during the blossom season. The coyotes relish the bean that grows on the branches, and among veteran desert men the opinion is generally held that the coyote more than any other agency is responsible for the seeding and reseedling of Mesquite over the whole desert region.

The seeds are highly nutritious, being 25 to 30 percent grape sugar. Ground

and mixed with water they make a drink as refreshing as lemonade. Freshly-ripe beans, crushed in a mortar, mixed with water and left for several hours, make a sort of cold mush.

J. Smeaton Chase referred to Mesquite as "the one great benefaction of Nature to her desert dwellers."

There are two common species on the desert of the Southwest, and a third not easily distinguishable from one of the others:

Prosopis juliflora* var. *glandulosa
(*Prosopis chilensis*, by some botanists)

The Honey Mesquite or Algaroba of the Mexicans is usually shrub-like, 10 to 20 feet high and twice as broad, with several stems from a short, thick trunk, the lower branches sprawling over the ground. In areas of deep sand, wind-blown drifts form about the trunk, enlarging until a huge dune buries all but the tips, which cloak the mound with lacy green. The vast sand stretches of Coachella valley are dominated by great mounds and clumps of Mesquite.

In rich river-bottom soil it becomes more tree-like, may reach 35 feet in height, always favoring the broad dome-shape, with recumbent lower branches. Well armed with sharp thorns an inch or so long, it might seem an inhospitable cantankerous tree. When left to its own devices it stretches out aggressive arms, as an octopus does its tentacles, but the intricate briery structure can be tunneled by hatchet or axe to a bower of friendly shade about the trunk.

The pinnate yellow-green leaves grow in pairs, with 14 to 30 unequal narrow leaflets one-half to one inch long. Fragrant tiny yellow flowers in slender spikes two or three inches long create an amazing profusion of bloom continuing well into summer, as bountiful a nectar field as ever lured the busy bees. The harvest of clear pale-amber honey is superfine. Later the tree is lavishly hung with clusters of "string-beans" four to eight inches long, ripening yellow.

A gum resembling gum arabic exudes from tree wounds which, dissolved in water, makes an excellent glue or varnish. A medicinal infusion of the gum served the early inhabitants as a gargle and remedy for sore eyes and open wounds. Pleasant of taste, the gum was also used in making candy.

The hard wood makes durable fence-posts, railroad ties, tool handles, charcoal and fuel par excellence. Honey Mesquite flourishes in the Colorado and Mojave Deserts, Arizona, New Mexico, Texas, Southern Utah and Nevada.

Prosopis pubescens

The Screwbean, or Tornillo of the Mexicans, has a more erect shapely habit of growth, commonly 15 to 35 feet high,

Continued on page 37



Above—Cluster of Honey Mesquite pods. They are nutritious food for man and other animals living on the desert. C. C. Pierce photo.

Below—Indian metate made from Mesquite trunk, and screen for sifting meal.

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AZINE

LURE OF THE "YELLOW STREAK"

BY E. A. BRININSTOOL
Hollywood, California

'Tis the yellow streak that tempts us out across
the desert wide,
To the ridges, stretching onward, over coulees
and divide.
'Tis the gleam of precious metal in the
slopes along the hills,
That gives to us our courage, and the desert
life its thrills.

We brave the heat of summer, when the sun
beats fiercely down,
Like a molten ball of fire, on the stretches
bare and brown.
And the chilling blasts of winter—we endure
the piercing cold
That our prospect may be favored by the
glitter of the gold.

We endure both thirst and hunger, as we
wander, day by day.
Over miles of arid region, where the heat-
waves dance and play;
Far removed from habitations of the favored
ones, we live,
And the best years of our manhood to this
game of chance we give.

Sometimes favored by Dame Fortune, but
more often scorned and spurned,
From the comforts of the cities to our lone
life we have turned.
And upon the trackless desert, where no kindly
voices speak,
We will keep our quest, till favored by the
riches which we seek!

MORNING IN THE HILLS

BY WALT H. HOLLIDAY
Butte, Montana

It's morning, be gosh, a marvelous morn—
It makes a man chuckle because he was born
And grew up and waited and lived just to
see

What a marvelous mornin' a mornin' can be.

It's a marvelous mornin', the sun has just
kissed
The top of the mountain and broke up the
mist
And his heat and his strength and his light's
comin' down—
To warm up our hearts and thaw out the
town.

Out there in the distance, where the peaks are
so blue,
Where the sky is all painted with every old
hue,
Don't it grip you and choke you and sadden
you here—
While you fight the old eye to keep back a
tear?

It's a marvelous morn, we're grateful and
glad:
We know after all the old world ain't so bad.
What a wonderful chance for a wonderful
day—
With no one to stop us from livin' that way.

CREED OF THE DESERT

BY JUNE LE MERT PAXTON

On a cholla he sits, the world to
defy;
Black bars on his tail, and a stripe
o'er his eye.
Friend birds say he's noisy, but
suddenly then
They hear the sweet song of the
Cactus Wren.



Rainbow Bridge

BY MARION WARREN HAMILTON
Peoria, Illinois

Nonnezoché, Bridge of Wonder,
Fashioned by a Hand sublime,
We, His puny children, ponder
Your indifference to Time.
Silent, through uncounted ages
You have arched the gorge below;
We, who've scarcely turned the pages
Of our years, before you bow.

Far from all that white men cherish
You have kept your lonely state;
Those who love the cheap and garish
Never seek the fine and great.
In a world of rocks and beauty,
Glowing over stream and sand,
Steadfastness, your only duty,
Faithful through the years you stand.

DESERT TEMPLE

BY GASPAR BELA DARUVARY
Hemet, California

A marble temple, beautiful and white,
I built me in the silent desert one day;
Methought I'll kneel within and softly pray
To God, and praise and worship Him and
light
My scented lamp, and in a wild delight
Cling to His silent, sacred feet and lay
My full-blown flower of youth, and seek the
way
To regions radiant, and clear and bright.

When suddenly, I felt a strange, sweet fire
Burn in my soul . . . The deep, blue skies
above,
The child's soft smile, the lover's new desire,
The saint's devotion and a mother's love,
In each I saw a Temple; great, divine,
More sacred and more beautiful than mine!

NIGHT WINDS

BY DANIEL BOONE HERRING
Las Vegas, Nevada

Out of the desert the night winds rise,
Like shrouded Arabs the night cloud flies;
And their dancing shadows on sage in bloom,
Move as graceful figures in an old ball room.

A boisterous wind turns to blustering
gale,
The clouds belch out like snow white
sail;
And shadows go galloping to horizon's
edge;
Covered with Star-Dust of the desert's
pledge.

Like ships at sea, that the helmsmen guide,
Carrying hearts that love, to the lover's side;
These racing clouds carry thoughts to you—
And your heart shall hear—my love is true.

True as the night wind, the desert knows,
Gold with the sunset—clean with the
snows;
Sweet with the sage bloom, warm as the
spring;
My heart on the night wind, this
message brings.

And I loose myself from the commonplace,
As I think of a mother's calm, sweet face;
And the babe she bore as the night winds
sung;
And the tempest that raged as the boy was
hung.

And out on my desert the winds abate,
In the mother's face I see no hate;
The shadows and the clouds have gone—
In the eastern sky—is the LIGHT OF
DAWN.

DESERT COLOR

BY HELEN GARTEN COTLEY
Clifton, Arizona

Green is the life of the desert,
The green of old silver and brass,
Of sotol, and greasewood, and cactus,
Of sagebrush, and spring-time, and grass.

Gold is the heart of the desert,
The gold of sunlight and song,
Of marigold and of poppy,
And a sand-swept floor, miles long.

Red is the strength of the desert,
The red of the towering hill,
Of the flame-tipped ocotillo,
And courage, and dawn in night's till.

Blue is the breath of the desert,
The blue of the wild hyacinth,
Of sky, and of turquoise, and distance,
And the soul of the night wind's scent.

AUTUMN SUNSET

BY MARY K. SAVAGE
Independence, California

The western sky is all a-flame
With deepest shades of Autumn hues
Above Sierra's snow-capped peaks
And lofty range of richest blues.

The colors now appearing in
A sky so brilliant and so bold
Are reflected once again
In shim'ring leaves of red and gold.

A golden glow like smould'ring coals
Is cast from heaven over all
And brings to earth a welcome warmth;
Dispels the chill of a ling'ring fall.

We need not search in far off fields
For all the fine things we may miss
When merely for the looking, we
May witness beauty such as this.

DOUBLE HUNT THIS YEAR

According to the announcement of William Sawtelle, Arizona game warden, two buffalo hunts will be held in 1940, the first January 12-15 and the second February 16-19. Twenty-five animals are to be killed at each hunt.

Sawtelle said the herd, which now numbers 243, is increasing faster than the available feed and water, hence the double hunt this season.

To be eligible, sportsmen must have a 1940 Arizona license purchased not later than January 3. The drawing will be held in the game warden's office at Phoenix January 5 at one p. m. Twenty-five names and 25 alternates will be chosen for each hunt. Hunters from outside the state will be required to have the \$25.00 non-resident license.



Mrs. Esta Imler of Phoenix, and the buffalo she shot

Buffalo Hunt in Arizona

Arizona's state-owned buffalo herd which roams the open range north of Grand Canyon under the guardianship of a deputy game warden, increases so rapidly as to threaten its food supply — and so the state permits hunters to kill a certain number of animals each year. Here is the story of one of the annual buffalo hunts — an event in which luck plays a very important part.

By RAYMOND F. LAW

GO into the office of the Imlers in Phoenix, Arizona and you will see on the floor the shaggy brown hide of a buffalo. Mrs. Esta Imler, tall, trim and capable, will glance up from her desk and admit the bare, unvarnished fact that she shot the animal last winter.

She doesn't tell you this herself, but she is one of the few sportswomen in the country who have hunted buffalo. It also develops that she is probably the only grandmother of this highly civilized age to achieve that distinction. But she doesn't look at all like a grandmother. She is an efficient woman of business and a leader in civic and fraternal organizations, and you will know it the first time you meet her.

Her husband and business associate,

Thomas J. Imler, quite a sportsman himself, is not so matter-of-fact about his wife's prowess with a rifle. He displays the buffalo hide with evident pride, pointing out the spot where the bullet entered, in just the right place to bring down the great beast, and explains that they are having the head mounted.

Some skeptic will rise to remark at this point, that they don't hunt buffaloes any more, the animal is practically extinct, and the few remaining are protected in zoos and government-supervised herds. With one exception this is true.

Mrs. Imler killed her buffalo in a perfectly legal manner, with more than one game warden watching her. The state of Arizona owns a herd of about 300, which it pridefully reminds the world is the

last band of these great animals to roam the open range. Each January the fish and game commission stages a hunt, when about a dozen lucky individuals are allowed to shoot a buffalo apiece.

That is how Mrs. Imler happened to become a buffalo hunter, although under conditions vastly different from the days when Indians and frontiersmen pursued the galloping beasts across the prairie on horseback and shot arrows or rifle bullets into their tough hides.

Last January Mrs. Imler was one of a party of two women and 12 men chosen for the hunt from 305 applicants by means of a drawing held in the office of William H. Sawtelle, state game warden. Another group will be selected this winter, although there may be no women

this time. It all depends on the luck of the draw. In previous years the number of hunters with buffalo ambitions went as high as 1,400, including many from other states. Before the state fair was discontinued a few years ago, the drawing was held there annually as a feature event.

The great shaggy wards of the state, descendants of the buffalo which once roamed wide expanses of the country on both sides of the Rocky mountains, graze peacefully in Houserock valley, in the remote northern part of Arizona lying between the Grand Canyon and the Utah border. Natural barriers form an ideal range, and the buffaloes have thrived in a locality in which they were not originally found. To the north of the valley they are hemmed in by great cliffs, 2,000 feet high. On the south is the Grand Canyon, mile-deep natural wonder of the world. High cliffs coming down to the Colorado river form the eastern boundary, and on the west is the high, steep approach to the Kaibab plateau.

Each winter the shots of the hunters echo for a day or two in this vast, almost uninhabited region, 400 miles north of Phoenix, then the herd resumes its grazing in silence and in peace.

Throughout the year the herd is in charge of a caretaker, a man who has one of the world's unique jobs. At the time of the hunt he is assisted by game wardens and other officials. The hunters don't

just blaze away at any buffalo they happen to spot. Certain animals are marked for killing, such as old, ill-tempered bulls who have been driven from the herd by the younger animals; barren and aged cows, and pintos, which have resulted from cross-breeding of buffalo cows and Hereford bulls, which also range in the valley.

Those who expect the hunt to be a thrilling and dangerous chase are disappointed. In fact, those who have participated say it is hard to believe buffalo hunting ever was the exciting affair it is pictured in books about life in the early west.

Last winter when they gathered in Houserock valley the hunters, including Mrs. Imler and Mrs. H. W. Tevin, also of Phoenix, found six or eight inches of snow which had fallen the day before. The day was grey and cold. Two or three cowboys held the herd together out on the plain, cutting out those marked for slaughter, one at a time.

When a hunter's turn came he approached the buffalo on foot and fired. Mrs. Imler brought down her game at about 100 yards.

The buffalo isn't much of a game animal, the hunters will tell you. When shot it usually stands helplessly or trots off uncertainly, until loss of blood causes

it to fall. Sometimes, when hit too far from a vital spot, it will take off at a gallop. Then the cowboys ride after it, head it off, and give the hunter a chance to catch up and complete the kill.

When each hunter has brought down his buffalo, the real work begins—skinning and cutting the huge carcasses. Because of their size and weight it is a long, tedious and difficult job to remove the hide properly for tanning into a rug. The head, too, must be skillfully taken off preparatory to handing over to a taxidermist for mounting. It costs the hunter about \$50 to have a head mounted, to say nothing of preparing the hide, but, after all, not everyone can kill a buffalo these days.

In addition to the head and hide, each hunter is allowed to keep one-quarter of the meat. The state sells the rest, using the proceeds to help maintain the herd.

The meat is sold to butcher shops in various parts of the state, giving housewives the chance to serve something different, and satisfying the curiosity of those who wonder what kind of meat the Indians and pioneers ate in the days when buffalo steaks were as staple as beef is today. The meat tastes much like beef, but is of a coarser fiber.

The animals of the Arizona herd are descendants of mid-western and Texas buffaloes gathered in the 1880s when it became evident the species was threatened

*Arizona's buffalo herd grazes on the open range north of Grand Canyon
Fraser photo.*



with extinction. In those days a number of herds were maintained as commercial propositions, buffaloes being bought and sold like cattle. Some went to zoos and public parks, and others were purchased by livestock men who experimented in domesticating them by crossing with cattle to produce the catalo. This was not very successful.

One of the traders of the time was Charles J. (Buffalo) Jones, a character who flits in and out of the pages of western history. In the late 80s he captured a number of wild buffalo calves in the Texas panhandle and succeeded in raising 57 to maturity. He increased the herd to 67 by purchases in Kansas and Nebraska.

In 1904 he bought a herd from Gen. E. J. Molera of Monterey, California, and took the whole lot to Houserock valley, Arizona. He was then in partnership with James Owens, famed character of the Grand Canyon country. In 1913 they divided the herd, Jones taking his share to Dalhart, Texas, where he sold them, and Owens keeping the remainder in Houserock valley.

Conditions were favorable there, and the herd increased. Owens found it a losing proposition financially, however, and in 1926 sold out to the state of Arizona for \$10,000. Thus the fish and game commission entered the buffalo business, and has continued to build up the herd until it is one of the largest in the country.

At the turn of the present century there were only two wild herds in America, the records show, one in Canada and one in Yellowstone national park, owned by the federal government. With no game laws to protect them, they were being killed off rapidly. Finally the government passed protective laws, and public and private agencies set about to save the comparatively few remaining of the millions which once dotted the plains.

Early travelers in the west told of moving for days without losing sight of the great dark herds. The first trains crossing the continent were often delayed by them. Indians subsisted on the meat and used the hides to build lodges, and make clothing, harness, boots and other necessities.

By 1875 the buffalo had been swept from the central plains before the advance of man, and was limited to areas in northwest Texas, western Kansas, Montana and the country to the north.

Buffalo hunting was pictured as one of the high adventures in the conquest of the west. One early account said "the simple chase on horseback was most exciting and perilous."

The animals also were trapped in great numbers by being driven into pits or natural depressions with the aid of crude-

DESERT QUIZ

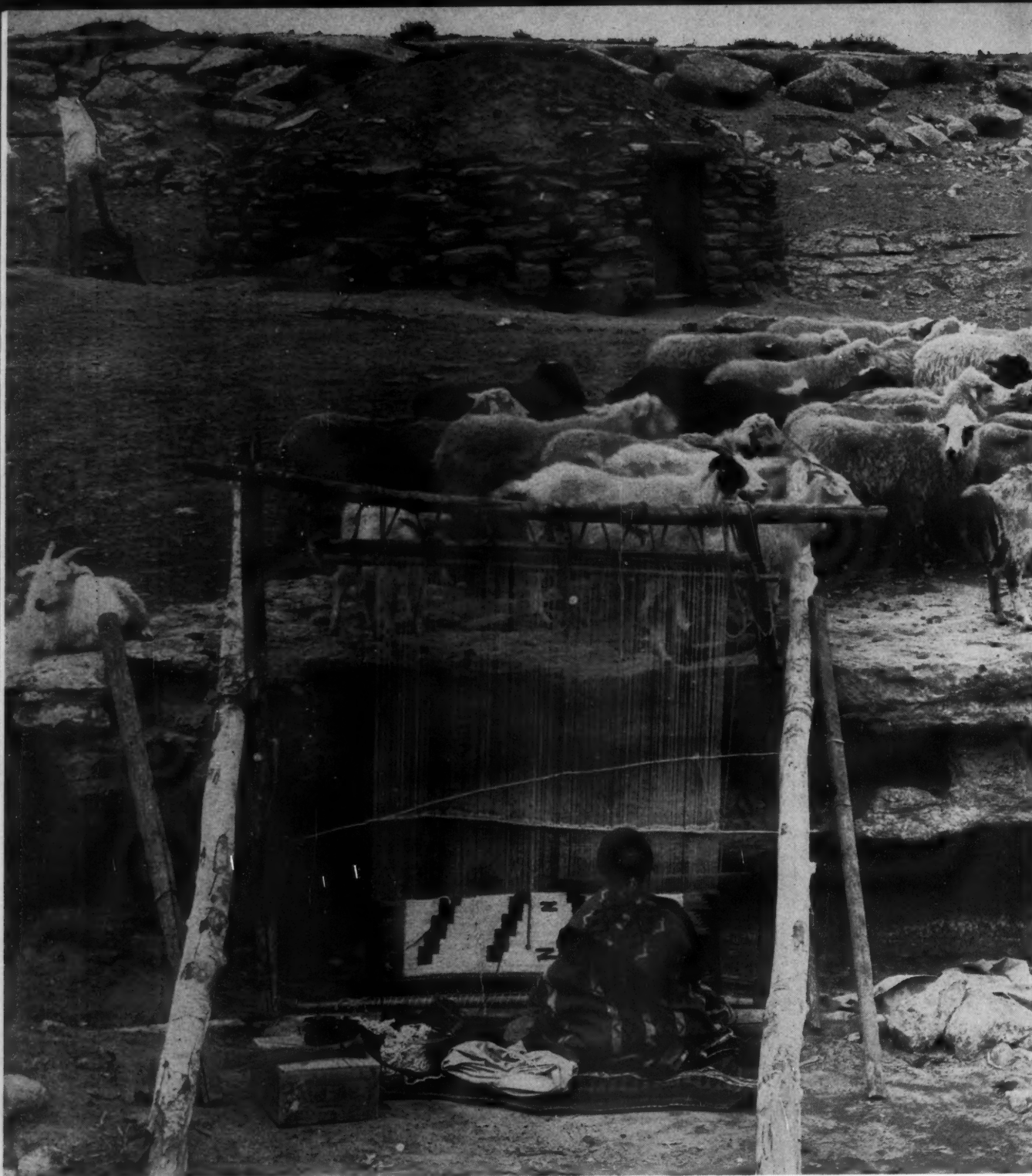
"Make 'em easier," begged one of the Desert Magazine readers. And so the Quiz this month is so elementary any good desert fan ought to know the answers. You have to get 12 of them right to qualify as a well-informed student of the geology, botany, Indian lore, geography and history of the southwestern desert country. Sixteen correct answers will give you membership in the grizzly order of desert rats—and 18 hits will qualify you for an S. D. S. (Sand Dune Sage). Answers on page 43.

- 1—Raton Pass is located in—
California..... New Mexico..... Utah..... Nevada.....
- 2—First water rights on the Lower Colorado river are held by—
Yuma valley..... Imperial valley.....
Palo Verde valley..... Chuckawalla valley.....
- 3—The Mormons originally went to Utah to—
Escape persecution..... Seek gold..... Trap beaver..... Hunt buffalo.....
- 4—In the annual Snake dance of the Hopi, the Snake clan is assisted by—
Katchina clan..... Corn clan..... Antelope clan..... Squash clan.....
- 5—U. S. Highway 66 crosses the Colorado river at—
Topock..... Needles..... Parker..... Blythe.....
- 6—Morro rock in New Mexico is famous because of its—
Peculiar shape..... Historical inscriptions.....
Inaccessibility to climbers..... Sacredness to Indians.....
- 7—Bright Angel trail leads to—
Bottom of Grand Canyon..... Top of Mt. Whitney.....
Rainbow natural bridge..... Valley of Fire.....
- 8—The army officer in charge of the first camel caravan across the United States was— Kit Carson..... Lieut. Emory.....
General Kearny..... Lieut. Beale.....
- 9—Among gem and mineral collectors the Chuckawalla mountains of California are known for their— Black diamonds..... Geodes.....
Tourmaline..... Turquoise.....
- 10—Chemehuevi Indians were most expert in the craft of—
Silversmithing..... Pottery..... Basketry..... Weaving.....
- 11—The Arizona home of Dick Wick Hall's famous frog that never learned to swim was— Quartzsite..... Wickenburg.....
Salome..... Hassayampa.....
- 12—The Indian story, The Delightmakers, was written by—
Lummis..... Austin..... James..... Bandelier.....
- 13—Smoke tree in its native habitat almost invariably grows—
On rocky mesas..... In desert playas.....
In sandy washes..... Around water holes.....
- 14—Father Font wrote his famous diary as a member of the expedition of—
De Anza..... Escalante..... Kino..... Coronado.....
- 15—Walpi Indian reservation is in—
Death Valley..... Southern Utah.....
New Mexico..... Northern Arizona.....
- 16—The stalactites found in caves generally are of—
Gypsum..... Travertine..... Calcite..... Limestone.....
- 17—Fruit of the native Washingtonia palm found in the southwestern desert when matured is— White..... Black..... Red..... Green.....
- 18—Albuquerque, New Mexico, was named in honor of a—
Spanish viceroy..... Jesuit padre..... Indian chief..... French trapper.....
- 19—Mountain Meadows massacre was in—
Utah..... New Mexico..... California..... Nevada.....
- 20—A mescal pit was used by the desert Indians for—
Storing food..... Cooking food.....
Sacred ceremony..... Burying dead.....

ly constructed fences. So deadly was the war of extermination that only a few thousand remained when conservation policies finally brought protection. There are now nine herds in the country under supervision of the federal government, numbering 2,435 animals as of 1938. These are located in Montana, Washing-

ton, D. C., Nebraska, North Carolina, Oklahoma, North Dakota and Wyoming.

Although almost universally called buffalo, the animal is correctly the American bison. It is characterized by its shaggy and massive fore quarters, old bulls weighing approximately a ton, and full grown fat females 1,200 pounds.



"Feel" of the Desert

By JOHN STEWART MacCLARY

Photograph by WM. M. PENNINGTON

IMITATIVENESS

In many of the crafts of simple desert culture the Navajo has become more adept than those who brought him first knowledge of these crafts. The Navajo did not originate the art of weaving but the women of the tribe have become the most skilled of weavers. Silversmithing was brought to these people by the Spaniards—but today the Indian is a master craftsman in this field.

It will be observed in this picture, however, that although the Navajo has roamed for countless generations in a region dotted with primitive masonry of a high order, he has failed to apply his imitative ability in this field. The older Indians still live in crudely built hogans. Some of the younger members of the tribe are now erecting more substantial homes.



Lame Man and the Blind Man

(A Hopi Legend)

As told to HARRY C. JAMES

Illustration by W. Mootzka, Hopi Artist

IN the old days there lived at Oraibi a man who was blind and also a man who was so crippled that it was impossible for him to walk or to use his arms or hands.

One day shortly after the people had finished their early meal, there was a great earthquake. A large part of the mesa out toward what we call Skeleton Gulch sank down several feet and a great crack appeared in the middle of the dance plaza of the village. The houses moved and the people were terrified. They seized their belongings and in a great hurry and confusion they left the village, forgetting in their terror the blind man and the cripple.

When the place was deserted and quiet, the blind man called out to his friend the cripple: "Come over to my house! Something bad has happened!"

The cripple answered back: "How can I come to you? You get your stick and come over to my house!"

The blind man did as his crippled friend asked. He felt his way along the street with a long stick he carried. The cripple one dragged himself to his doorway and aided the other by calling to

him to avoid the rocks and holes along the way.

When the blind man arrived, the crippled one said: "Something dreadful has happened! The earth has shaken and the people have all run away in great fear. Let us follow them. Your arms and legs are strong. You carry me on your shoulder and I can see the way to direct you."

The blind man agreed, but suggested that he should take a bow and some arrows in his belt. The blind man lifted the cripple up on his shoulders and they started off after the Oraibi people.

The blind man was strong and carried the thin and wasted cripple as easily as a little child. The crippled one picked a smooth trail for him and would turn his head from side to side to show the direction they should take. In this way they got along very well. They had gone quite a little distance when they met a large elk. "My, what is that large creature?" said the crippled one.

He described it very carefully to the blind man who knew that it must be an elk. As they were in great need of food, they decided that they would try to kill the animal. The cripple took the blind

man's head between his hands and directed him cautiously to a spot close to the elk. He then put the bow and arrows in the blind one's hands and sighted an arrow carefully for him. The blind man drew the shaft and released it.

The One-That-Does-Good-For-Us-All was with them and the elk was killed. The two men prepared a small fire and roasted some of the good meat. As they were eating, there was a terrible explosion in the fire. They jumped to their feet in fright and surprise.

When their hearts became quiet they realized that something marvelous had happened to them. The cripple was standing up and the blind man could see!

They soon found the Oraibi people, who were surprised to see the men. The people said: "Why, you were lame and blind! Now you can walk and see! What has happened?"

The man who had been blind and the man who had been crippled led the people back to the village. If it had not been for those two, Oraibi would now be nothing but a ruin tempting the curiosity of white men.

Nature's Tapestry in Eagle Canyon

By RANDALL HENDERSON

MY first hint of the scenic beauty in Eagle canyon came from Nellie Coffman of the Desert Inn at Palm Springs.

"Many years ago we were prospecting in the hills for water," she told me. "We followed a small canyon in which were crystal clear pools of water. At one place it was necessary to take off my shoes and wade to continue up the canyon. Once I fell in.

"Water was running part of the way, and then the stream would disappear beneath the sand for a distance. Finally we came to where our way was blocked by a vertical fall—and the whole face of that cliff was covered with maidenhair ferns.

"It was a lovely spot. But I have never returned there, and it has become a lost canyon to me. I did not know the name of the canyon—and after all these years I have forgotten how we reached it."

I've had more fun tramping the desert looking for lost canyons than I have for lost gold mines. They are easier to find. And so I listened to Mrs. Coffman and made a mental note that sooner or later I was going to seek the location of this canyon oasis where maidenhair ferns had invaded the rim of the desert.

I talked with some of the old-timers around Palm Springs but none of them could give me a clue. They referred to Tahquitz and Chino and Andreas and Murray — all canyons well known to those who have explored the eastern base of San Jacinto mountains. But I knew it was none of these.

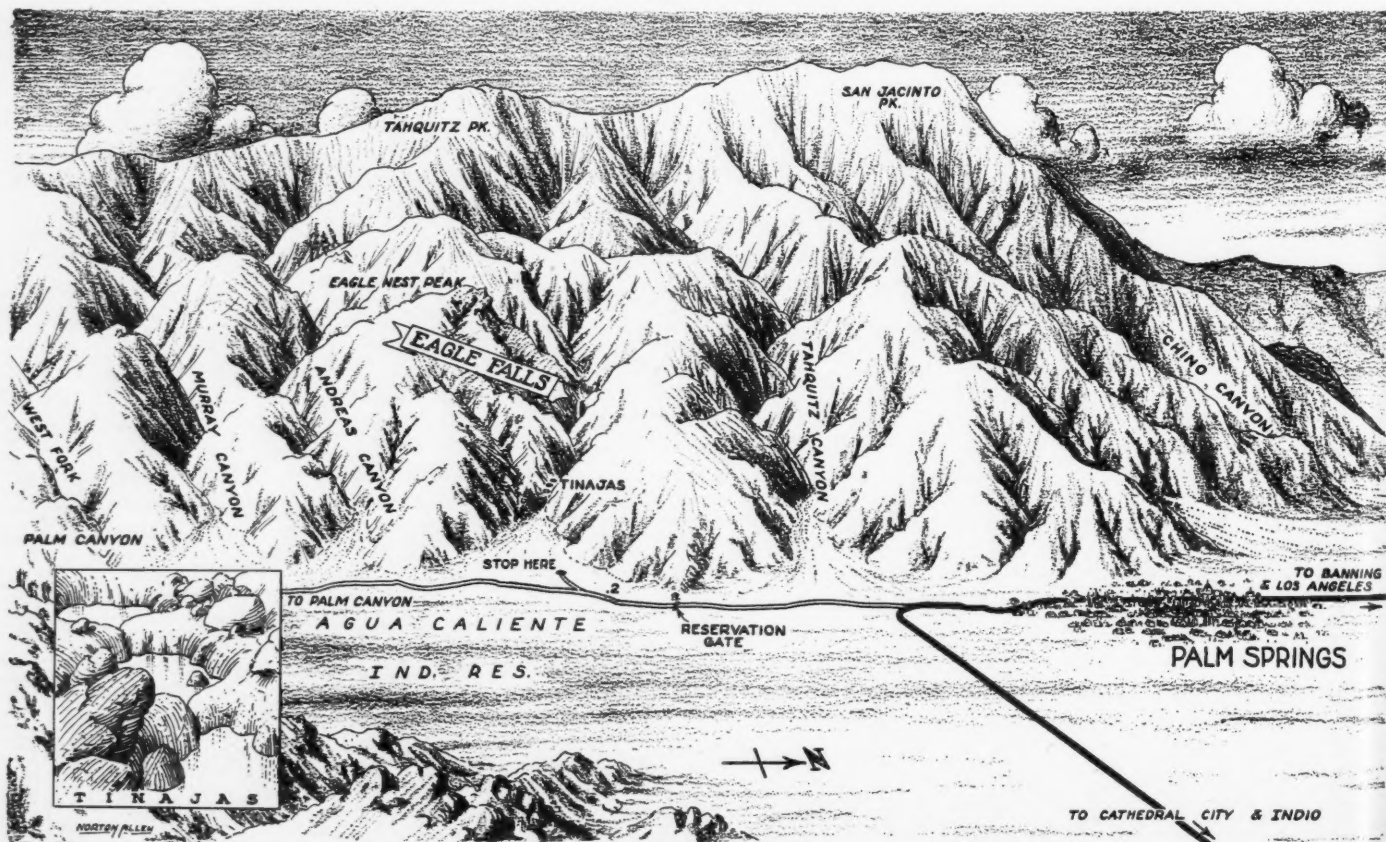
Then one day Don Admiral was telling about a little-known canyon he had visited. Some of the details of his description seemed to fit well with Mrs. Coffman's story. Don had seen no ferns—but he had not hiked far back into the upper reaches of the canyon.

He readily agreed to accompany me

there. We invited Dr. Maris Harvey of Pomona and Bill Hillery of Cathedral City to make it a foursome. Dr. Harvey and Don are always eager to go where they may find new botanical specimens—and Bill and I like to go along and listen to their jargon and once in a while we remember one of the Latin names they tell us.

Don did not know a name for the canyon, but it was easy to locate. It extends from the floor of the desert back into the rugged slope of San Jacinto between Andreas and Murray canyons. An old government experimental farm is located near the mouth—and high on the precipitous south wall of the canyon there is a great slab of white rock, projecting into the sky in sharp contrast with the chocolate-colored gneiss of the surrounding area.

Early one morning we packed our lunch in knapsacks and motored along the road leading from Palm Springs to-



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ward Palm canyon. Three miles from the springs we came to the little garita at the reservation boundary where the Cahuilla Indians levy a tribute on all who pass that way. But the fee is moderate—25 cents for a car and two persons and 10 cents for each additional passenger. The national park service now charges more for admission to many areas with no greater scenic interest than Palm canyon. The Indians receive about \$9,000 annually from this source — and it is little enough for the concessions they have made to the white men who have invaded their ancient home.

John Andreas was on duty at the gate. John is the son of old Captain Andreas for whom one of the nearby canyons was named. The captain has been dead many years. From John we learned the name of the canyon which was our goal—and no one is better qualified to give this information, for this elderly Indian has watched the sun set behind San Jacinto and Tahquitz peaks for 70-odd years.

"When I was a boy," he

This picture of the maidenhair ferns and wild grapevines on the 100-foot cliff does not indicate to the lovely coloring of this natural tapestry.

told us, "an eagle had its nest for many years in the great white rock you see in the south wall of the canyon. The rock was *os wit teke*, home of the eagle. The canyon below was *os wit*—eagle."

Later, Mrs. Marcus of the Cahuilla tribe at Palm Springs told this story: The Indians held an eagle ceremony each year. Certain men of the clan would go to the rock and catch young eagles and bring them to camp and confine them in a cradle similar



Looking down Eagle canyon toward the floor of the desert from the top of the falls.

to that used for Indian babies. They were cared for until grown.

During the ceremony an eagle would be placed where the Indians could look him in the eye. Then by the power of suggestion the bird would be killed. A tribesman who could thus kill an eagle had great influence in the tribe. If Indians from neigh-



From a ridge on the north, Eagle's Nest rock has the contour of an aged human face.

boring tribes came in and disturbed the eagles before they were captured, or after they were caught and confined, it was a violation to be avenged by death.

And so the little canyon we proposed to explore really had a name and a history.

Two-tenths of a mile beyond the garita we turned to a side road on the right, and parked our car in a little clearing beside a knob of brown slabs of rock.

Approaching the entrance to the canyon there appeared to be two of them with an island in the center. The

right channel is a small arroyo that extends up the slope to a little spring surrounded by eight palms, and then disappears.

Eagle canyon is the left channel. We found no trail at this point but it was easy hiking across the alluvial fan through greasewood, bisnaga, buckhorn, ocotillo and the other shrubs of this zone.

A mile from the road, and the arroyo had narrowed to a rocky well-defined channel. Here we made our first interesting discovery—a series of natural tanks

Continued on page 26



Imperial dam, where water from the Colorado river is to be diverted to the new Gila valley canal system. The basin below the dam is for desilting the water. The Gila canal takes off to the right, in the center of the picture, and the sluicing channel to the left.

They're Bringing Water to Gila Valley

By TAZE and JESSIE LAMB

Photographs by Reclamation Bureau

THE Gentleman from Minnesota had the floor in the House of Representatives at Washington and the gentleman was excited.

"They call this the Gila project," he shouted, and there was venom in the way he lingered on the word "H-e-e-l-a."

"It is well named. The gila is a poisonous lizard of the desert, and this project is poisonous, so full of poison Congress will do well not to touch it for the next 500 years."

Anti-reclamation congressmen applauded. Debate was on an item appropriating funds to irrigate 150,000 acres of desert land near Yuma in the southwestern corner of Arizona along the Mexican border. In the House gallery an Arizona lawyer, Hugo Farmer, who had nursed the Gila project since its birth, followed the speeches with anxiety. As usual, certain congressmen from eastern states

where rainfall is plentiful were deaf to the arid west's cry for water.

It was July 26, 1937. The project—born on paper in 1935—was two years old. Its fate hung in the balance. Without an appropriation, work would stop, the cherished dream of new farms would be shattered.

The question was put. Noes drowned the ayes. It looked bad for the Gila project.

Western members asked for a count. On a standing vote the appropriation lost by a dozen tallies.

Roll call was demanded. Whips hurried into the halls, into cloak rooms, into offices, rounding up absentees.

Thanks to rallying forces, by a margin of 13 votes the appropriation of \$700,000 was approved. Fertile desert acres waiting under a warm sun for water were nearer transformation into homesteads.

Near Yuma in the southwestern corner of Arizona, Reclamation bureau engineers are directing the construction of a new irrigation system designed eventually to convert 585,000 acres of virgin desert land to highly productive farms. The first 30,000-acre unit is scheduled to have water in 1941. New farms in the arid West are not won without long years of courageous effort—and the Yuma-Gila project is no exception. Here is a story that will give you a better understanding of the problems of reclaiming the desert.

Farmer sighed with relief. He had good news now to take back home to Yuma.

Since that debate in 1937, Congress regularly appropriates money for the Gila project's first unit, and \$6,850,000 has been made available for its construction. Reclamation engineers have virtually completed building diversion works and digging a main canal.

Late in October of this year we drove to Yuma to talk to Hugo Farmer about this project for new homes on the desert frontier. We saw a tamed and harnessed Colorado river spilling peacefully at Imperial dam, a concrete structure three-quarters of a mile long between California and Arizona abutments. The dam is a few miles upstream from where the Gila empties into the Colorado.

We followed the Gila gravity canal 21 miles from headworks at the dam through



Hugo Farmer, leader in the long fight to bring irrigation water to Gila valley and mesa—and a typical view of the desert to be reclaimed.

two tunnels under the Laguna mountains and a siphon beneath the Gila river to the foot of the mesa 10 miles east of Yuma.

There the unmarred desert stretches away eastward to the jagged peaks of the Gilas. To the south its flat terrain extends across the border to the Sonoran mesa in Mexico. Westward the land slopes to the cultivated Yuma valley along the Colorado. Across the river in California, Pilot Knob, a 49ers' landmark, stands out boldly and on the southwestern horizon the Cocopahs rear their saw-tooth summits.

In the north, Castle Dome cuts the Arizona skyline and old Picacho is a towering pinnacle at the end of the Chocolates.

Farmer pointed to neat homes and green alfalfa fields in the Gila valley, and to orderly rows of grapefruit orchards and date palms, growing at the edge of the settled district extending to the Colorado.

"You can see what this land will produce when it gets water," he said. We could see. It was convincing proof.

Geologically, this is an old region. In the glacial age the Colorado carried tremendous loads of soil, clay, gravel and

sand from the high mountains of its upper watershed. Hemmed in narrow canyons for 1200 miles, the channel reached open country after passing the Chocolates and Lagunas. Meandering in a snake-like course across a broad delta between the Gilas in Arizona and the Salton sea district of California, flood waters laid down their burden.

The mesa on which we stood is part of this great alluvial fan. Borings show river deposits 260 feet deep.

Drainage is the nightmare of most irrigated districts. But here the porous soils of the Pleistocene period guarantee there will be no drainage problem.

Irrigation is no new thing to this region. Ruins of prehistoric canal systems show how water was led to fields of the Hohokam, legendary residents of an unknown past in the Salt river valley. When Spanish explorers visited the Pima Indians along the Gila 400 years ago the white men found farms irrigated from canals that had been built at some unknown date in the prehistoric period.

First concrete proposals for the present work in the Gila valley were made in

1934 when Porter Preston, Reclamation bureau engineer, filed in Washington a report recommending the development of the area. According to his plan the project ultimately will embrace 585,000 acres of land. There will be four major units, extending from Yuma along the Gila valley 85 miles.

Dr. Elwood Mead was reclamation commissioner when Preston made his initial report. He endorsed the project, and upon his recommendation Secretary of Interior Ickes gave his approval.

In order to provide a legal agency with which the government could enter into a contract, Hugo Farmer and a group of Yuma men organized the Yuma-Gila irrigation district. O. T. McCoon was elected president; Kenneth B. McMahan, vice president; A. J. Griffin, director, and Farmer secretary and attorney.

Construction bids were invited, to be opened December 4, 1935 and the Yuma people were happy. But their fight was not won. The Gila project became a storm center involving two cabinet officers and the controversy was carried to the White House before final victory.

Adverse reports as to the character of the soil were made by field men in the department of agriculture. Secretary Wallace went to the president, the pro-

ject was suspended, all bids were returned unopened.

The interior department took up the battle for the Arizonans. A special commission was appointed and everybody waited for new findings.

The project's sponsors wanted quick action. They must establish priority of water rights. Mexico was setting up agrarian colonies below the line to bolster that nation's claims to Colorado flow. Other Arizona communities were asking for a lion's share of the state's allocated 2,800,000 acre feet of Colorado river water. Gila and Yuma lands will use eventually 1,905,250 acre feet.

Water spells life in all this arid country and its people fight for water as they fight for life itself. Flowing streams are the Maginot and Siegfried lines in water wars.

An engineer from California, a geologist from Utah and a soil scientist from Oregon—all nationally recognized authorities—were the special commissioners named by Secretary Ickes. In January, 1936, they reported:

"The (Gila) project is this state's one opportunity to use Colorado river water before it flows on across the national boundary. Natural flow of the Colorado allocated to Arizona is adequate. Feasibility rests on cheap power from Boulder and Parker dams. The project will preserve a water resource for eventual de-

velopment of an empire of national importance."

Fertility of soil was attested, climate was defended.

This report from disinterested scientific men turned the tide. The project was reinstated, bids were again advertised, contracts were awarded and first dirt was turned the following May.

Everything has been completed now, except "a little cement work on canal and structures" from Imperial dam down to the pumping plant at the mesa lift. Pumps have been ordered and a contractor is building the 130-mile transmission line from Parker dam to carry electricity to the new land. Copper is being used as a conductor because Arizona balked at aluminum. Copper stands first in the state's mining industry.

Preston estimated it would cost \$19,475,000 to turn the first 150,000 acres into farms. The government is financing the development, and the money will be repaid by settlers at the rate of \$3.25 an acre annually for mesa lands and \$1.85 for valley lands. Power for pumping to the mesa levels will come from a hydroelectric plant at Parker.

A distribution system is being laid out now for the first 30,000 acres to be brought under the plow.

Gila gravity main canal looking south from a point near the diversion works. This canal passes through the hills on the extreme right in a tunnel.

"We will have water in 1941," Farmer predicts.

Greater portion of the area is government land withdrawn from entry March 14, 1929. Settlement will be made under rules and regulations drawn by the secretary of the interior, complying with an act of congress giving 90-day preferential rights to men who served in Uncle Sam's armed forces during war.

A homestead claimant must have \$2000 cash or equivalent in farming equipment, must prove farming experience to indicate a reasonable chance of success, must have good health. Details of the settlement plan, size of farm units, remain to be worked out. One thing is definitely known: No land will be opened to entry until the water distribution system is ready to work.

If the suggestion of the special commissioners is followed, not only will water be ready for delivery to each farm before settlement, but crops will be planted and actually growing before settlers move in.

For general farming 80-acre units are proposed. Crops would include seed alfalfa, seed flax, cotton, sorghum, forage and winter vegetables. Livestock would have a place in the farm program, of course. For semi-tropical horticulture units of 10 acres for dates, 20 to 40 for citrus are favored. Pecans, grapefruit, winter oranges, lemons, limes, tangerines, papayas, grapes, figs, olives, apricots, and



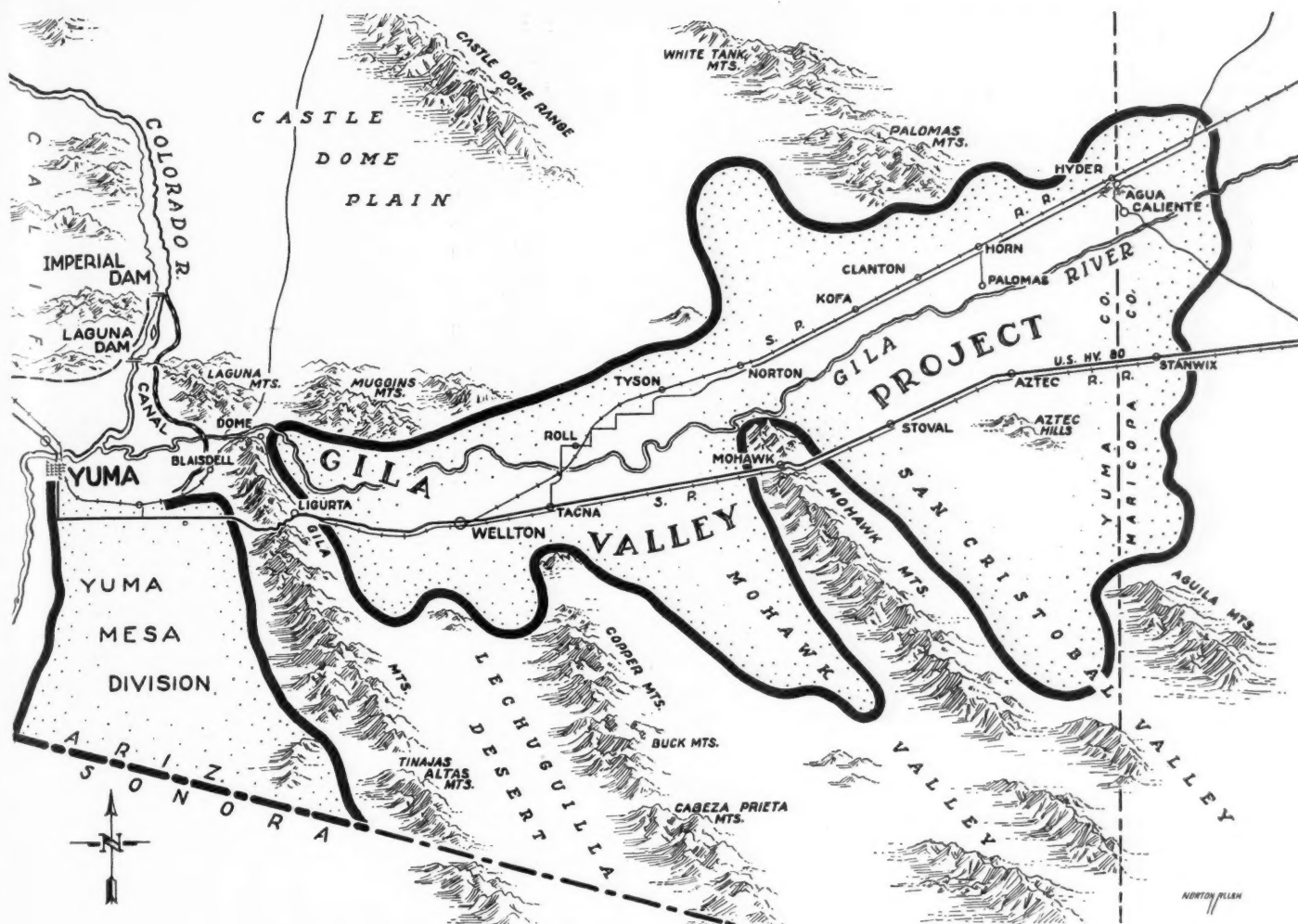
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Heavy black lines enclose the areas to be irrigated when the Gila project is completed.

strawberries are specified as likely to do well.

Inexpensive air cooling of insulated homes will make living comfortable during the hot summers. Nowhere is winter more pleasant than in this locality, where Yuma holds the title "Sunshine Capital of the World." Sunshine averages 92 per cent of the possible hours. Forty years' records show no killing frost on the mesa.

Some of the Gila project's sponsors hope that when settlement rules are issued at Washington a board will be authorized to examine applicants' qualifications. Members of the board would be selected from the general land office, reclamation bureau and Yuma-Gila district organization.

Economic value of the program is indicated by the investigators who compared the Gila plan to irrigation development in Salt river valley. In 1910 approximately 131,000 acres were farmed in the Salt river valley. Roosevelt dam and allied works were completed at that time. Now the irrigated area of the val-

ley has been practically doubled, and the development has brought greatly increased value to all property in Maricopa county. In 1910 the county's total assessed valuation was \$17,388,067; now it exceeds \$105,500,000, an increase of more than \$88,000,000, due chiefly to a regulated water supply and its use as a source of electric power.

Boulder, Parker and Imperial dams have regulated the water supply for the Gila project and have made electric power available.

River junction communities usually are rich in history and this is true of Yuma. Here, in the dim days of early history wayfarers trudged on river trails which even then were ancient. Indians were living here in mud and wattle houses when Juan de la Asuncion arrived in 1538, earliest Spanish explorer, according to Farish, the Arizona historian. There are some of this same type of mud and wattle houses occupied in Yuma today within a few blocks of many-storied steel and concrete air conditioned buildings, and Indians loaf in the balmy winter sunshine on downtown street corners. In 1540 de

Alarcon sailed up the Colorado to Yuma from the Vermilion sea. Nearly 250 years later Father Garces founded Yuma's first Christian mission on a hill where the cross still stands.

Traders, trappers, men of arms, adventurers through the centuries have known this town. Overland stages rattled through its streets on long desert trips carrying transcontinental mails and homeseekers. Here blue coats guarded the emigrant route, and here came waterborne traffic between the mines of the interior and sea ports on the wide Pacific.

Now, paved highways run across the sundrenched mesas where bare feet, boots and clumsy freight wagons once stirred choking trail dust and steel rails follow the river paths of history and legend.

Modes change, but the driving urges of mankind are unchanged. Adventurers and homeseekers still come this way. Pioneers persist, even though pioneering has gone streamlined.

The gentleman from Minnesota may yet change his mind about the Gila project if he becomes better acquainted with it and with its people.

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Angelus De Anza
HOTEL

EAGLE CANYON . . .

Continued from page 21

in the smooth rock floor of the canyon with clear pools of water in eight of them.

Visitors to the desert often ask me where they may see natural tanks such as have played so important a part in the history of the desert country—and I can suggest no more accessible place than this, in the Southern California desert. These tanks are so exposed to the sun they probably are dry during the summer months, but at this season of the year they are most inviting.

Above the tinajas the canyon became more rocky and frequently we had to scramble over huge boulders. At one point, I climbed to the north ridge to take a picture of the rock where the eagle had its nest—and discovered from this angle the perfect profile of an aged human face. The picture accompanies this story.

Occasionally along the way we found running water, and then the stream would disappear.

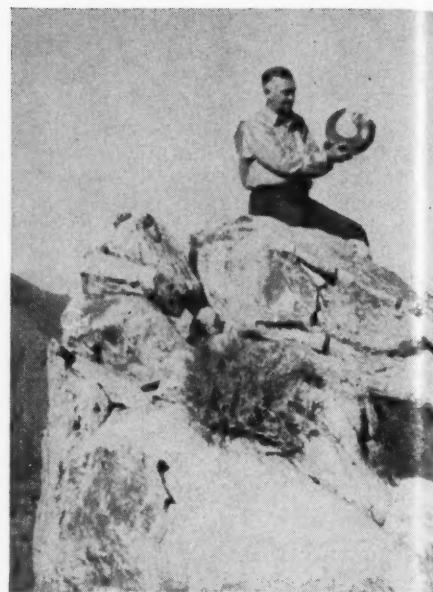
It was nearly a mile beyond the tanks, and we had climbed several hundred feet in elevation when we rounded a turn in the canyon—and there beyond a little grove of sycamore trees our route was blocked with an almost vertical wall of rock—and it was covered with green vegetation. It was at least 100 feet in height.

The face of the cliff was shaded—but I knew before we were close enough to see the detail of the plant life that we had found the cove where Nellie Coffman's maidenhair ferns were growing. This spot is hardly more than five miles from Palm Springs where thousands of motorists come to relax in the desert sunshine every month of the winter season—and yet this canyon retreat bore not a footprint or scar to indicate that human being ever had been there.

Tiny rivulets of water ran down over the face of the wall, and between them were great banks of luxuriant ferns—a gorgeous tapestry splashed in places with the golden autumn leaves of wild grapevine that grew in a veritable jungle among the sycamores at the base of the cliff. And, as if the ferns and wild grape were not enough decoration for this little cove, nature had planted at the foot of the falls a desert orchid.

No wonder Nellie Coffman has remembered that little cove all these years. Who could ever forget such a picture?

A thick coating of travertine—Don Admiral says it is not a true travertine—covered the face of the cliff, and it is in



Don Admiral on the peak of Eagle's Nest rock, with a sheep horn found among the crags.

the porous substance of this deposit that the ferns find root.

We could have remained there for hours—but we wanted to climb to the top of the falls, and it was evident the detour up the steep slope to the left would take some time. So we made our way up over the ledges to the top, and found smooth granite boulders on which to spread our lunch.

This trip was made last November when the flowers on the desert were in blossom, and we looked down from our balcony seats to a desert floor where great areas were tinted with the purple of verbenas. The flower display from our lookout was worth the climb even if we had failed to find the wall of ferns.

Then Don and I climbed up the slopes through miniature forests of ribbonwood to the white slab of rock where the eagle once had its nest. We did not look for the old nest—it probably succumbed to the elements many years ago. But Don wanted to examine the substance of the white rock more closely. We built a little cairn at the summit, and then followed the ridge down to the experiment farm at the base where we met our companions of the trail.

Oswit canyon to the Cahuillas—Eagle canyon to us—call it whichever you wish—is a fascinating trip for those who do not mind a few catsclaw scratches and the rather arduous climb over the boulders along the route.

Go there if and when you have the opportunity—but let's keep Nellie Coffman's fern garden just as old Mother Nature created it.

As the pages were being made ready for the printing of this story of George Griggs, the news came that he had passed away after a short illness. It is regretted that this acknowledgment of his fine service could not have appeared while he was still living. Since that could not be, the text is being published unchanged, as a tribute to a gentleman, and one of the finest pioneers of the old West.

The Count of Old Mesilla

By MARJORIE BONIFACE
Photographs by Howard Brown

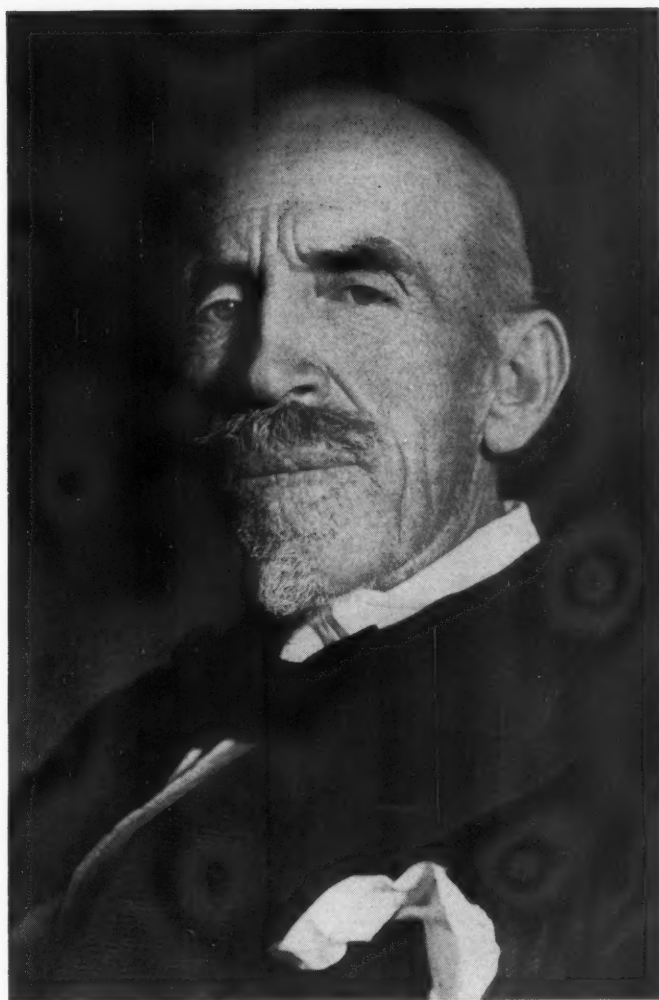
I saw him first on a float in the annual Sun Carnival in El Paso, Texas, on New Year's day. In a long procession of surprisingly beautiful and historically significant floats this one came into view, a dignified, impressive courtroom scene, depicting the trial of Billy the Kid, youthful southwestern outlaw of the 19th century. The members of the court were dressed in the fashion of that period and had succeeded in capturing an atmosphere of authenticity. The judge, in particular, appeared especially convincing. He was George Griggs, aptly referred to in his section of the country as the Count of Old Mesilla. Later I was to hear the story of the birth of that float—it took second prize in the parade—and an anecdote concerning it, from the man himself.

As I watched the procession I asked questions about him. "He is really a distinguished man," I was told, "perhaps the greatest living authority on the history of the old Mesilla valley, and that valley made history, you know. He has a Ph. D. and has written several historical books which are listed in the card index of text books in the Library of Congress." Luckily, I had spoken to one who knew about him, for not every one does, I was to learn. "Have you seen his museum at La Mesilla, New Mexico, 40 miles up the Rio Grande river from El Paso? It is called the Billy the Kid museum, but actually that's just a come-on sign. The place," my informer said with a smile at his own hyperbole, "is a million-dollar adobe hut!"

"What should I see there?" I wanted to know. "I've read all about Billy the Kid; every school boy and girl has heard of him and his brief and bloody career, but you say that sign is only a come-on sign for the museum. Just what else of interest would I see?"

"Well," smiled this patron of the arts, for such he is, "you would meet the Count of Old Mesilla, for one thing. And you'd be charmed with him. Do you like old pictures? He has them, collected from old Spanish and Mexican homes and from old churches, some of them dating back to the days of the conquistadores. There are ancient china and silver and valuable vases, some with the Austrian coat of arms emblazoned upon them, that once graced the court of Maximilian and his poor mad empress, Carlotta. He was once ruler of Mexico, you remember. There are old maps and legal documents that are to be found nowhere else in the United States. And there's an old 'breeches' Bible—but you must see for yourself!"

That is how I became interested in this man who lives with



George Griggs—the Count of Old Mesilla.

his relics in the ancient, flat-topped adobe house in the still more-ancient town of Old Mesilla, (pronounced May-see-ya) in New Mexico.

He will welcome you at the door of his crumbling, old adobe house, this Count of Old Mesilla. The Rio Grande flows mutely by a block away with no voice to tell you of the time its bed was dry for months because its waters were summoned beneath the earth until its underground channels had been filled; nor of the times it capriciously changed its course so that the old town lay first on one side of the river and then on the other. But he can tell you all of this and many many other things of interest, this gracious gentleman with his soldierly bearing and neatly-clipped, greying moustache and van dyke, for his father helped to make history in this land of the Guadalupe Hidalgo Treaty and Gadsden Purchase, when Mesilla was the capital of the great Arizona Territory. The Count himself has known it for 70 interesting, colorful years.

"Come in," he will bid you in the manner of hospitable host to welcome guest, and stand aside courteously to let you pass. There is a fee of 25 cents per person, Mr. Griggs' livelihood and sole income from his exhibit, but you will pay that upon leaving. You enter this ancient adobe house upon his invitation, a little stunned by the contrast between the man and his surroundings. True, there is likely to be a film of dust over the neatly buttoned coat of his dark suit, candle drippings on his hands from having lighted some dark niche so that a guest might see into it, but the man himself is alert, his slender figure straight; his movements quick, and his fine eyes vivid, yet all about him, his patio of dusty earth;

his cobwebbed walls and ceilings; his old, uneven floors and, most of all, his treasures, seem slumbering, centuries dead.

"Have you a little time?" he will ask. "I should like to show you a few other things that I have here," half insistent, half apologetic, for so many are interested in the Billy the Kid collection only. Unless you are in too great a hurry you will let him show you his entire collection. But you probably will anyway, for if you hesitate over the idea for as much as half a second you will promptly be whisked into the smaller of his two display rooms where you will immediately be looking and listening to what he has to tell you. All the time he talks rapidly, continuously, going from one exhibit to another, at the same time keeping a wary eye on the visitor for the first sign of flagging interest. He has learned that his guests grow impatient if he explains too much at length, for so many people have little interest in his ancient, historical collection, caring only to be shown Billy the Kid's handcuffs, etcetera, and to be permitted to run a finger over the notches in the butt of his gun.

So he moves hastily, stopping to pick up a book or paper now and then to point out the words of an authority proving the authenticity of this thing or that.

"Look. You don't have to believe me," he says. "Read what one of the masters had to say of this!"

"Read it aloud," he bids you. And you will read it so that the rest of your party may hear, while only one need take the time to read. Oh, he understands us, his hurried public!



Exterior view of the Billy the Kid Museum.

"Now, now," and he will lead you into the larger display room. His manner begs, "Do not be impatient; here, at last, you will find something that will interest you. Soon now, very soon, we shall talk of the Billy the Kid collection. But first, have you ever seen a 'breeches' Bible?"

"Look!" and the book falls open in his hands to Genesis

Inside the old adobe building George Griggs has assembled an almost priceless collection of relics of the old West.



the third chapter and 7th verse. "What does it say right here? Read it, read what it says."

And the eyes of them both were opened, and they knew that they were naked; and they sewed fig leaves together, and made themselves breeches.

That catches their interest, amuses them, nine times out of ten, for not one person in fifty has ever heard of the "breeches" Bibles.

You look about you and see the treasures around the room in seemingly careless array. Some of them priceless; all of them interesting. They lie on the mantel, on desks and shelves. Historic papers in frail bindings stand on the floor, leaning against the wall.

"Surely," you are bound to think, "there must be mice here. And a spark from that open fireplace where, even now, a fire smolders, could send this entire collection up in flames!"

"How dreadful it would be," you venture to say, "if you should have a fire here; if these old things should be destroyed."

"There is danger of fire everywhere," he answers, dismissing the suggestion with gentle courtesy. "But look . . ." and he is off again.

You will probably say no more in criticism of his arrangements. After all, they are his, and he has lived with them, in his own way, for a great many years.

He was born in this ancient town of La Mesilla, a descendant of the Griggs who was attorney general under McKinley. He grew up here, but was sent away to be educated, taking his degree from a Mexican university. There is a strain of French blood in his ancestry. You will detect the Latin flavor in his courtly, gracious manners and in his accent. But this Mesilla valley, land of his birth, had a charm for him that was magnetic.

Always he has come back to it, and the study of events that have made and shaped its history, the compiling of all facts pertaining to it, has been a hobby of a lifetime. He has written a book, "The History of the Mesilla Valley," which is entirely authentic, yet is as interesting as a novel.

Next in importance to his consuming interest as a historian, and growing out of that interest, has been his hobby of collecting antiques. Anything of interest, but especially those things from his own territory which is so rich in the things of old Indian, Spanish and Mexican civilization. Some of these things were left him by his father, but most of them he has ferreted out himself, from old homes, churches — everywhere.

He has gone to just as much pains in gathering his collection of Billy the Kid relics, for the valley of Mesilla was the young outlaw's stamping ground for some of his most exciting adventures. Mr. Griggs has in his possession the old warrant for Billy's arrest. Here in the ancient town of La Mesilla stood the court house in which he was tried. Mr. Griggs can tell you everything there is to tell about Billy the Kid — and don't think he can't! — but he is much more interested in other things. Ernie Pyle, the columnist, once said of him, "The truth is, George Griggs doesn't give a damn about Billy the Kid. He just has the stuff here for tourists."

The opera, for instance, is one thing he dearly loves. And he has many recollections, this bachelor, of old fiestas, the music of guitars, and lovely señoritas. But he does not talk about himself very much, nor very often. There are days when he cannot be persuaded to speak of himself at all. The exhibit is what tourists come to see, to talk about, and the Count sees that they receive their money's worth.

The questions he is sometimes asked about Billy both amuse and disgust him. Some of his visitors mistake him for an old pal of the outlaw. Others will ask him if he is the man who killed Billy, while still others, who are learning something of the Kid's history for the first time, want to know if he, the Count, is Billy the Kid. That disgusts him so thoroughly that

if it were not for the 25 cents he expects to collect, he would probably show them the door.—"Good afternoon, Sir!" Certainly he would wish to.

"I saw Billy once," he told me. "I was a little boy. My father sent me to the saloon for a bucket of beer, and when I got inside I saw Billy the Kid and recognized him. I ran home as fast as my legs would carry me — without the beer." He added, "The saloon was in this very room."

He is likely to break off from his reminiscence very abruptly if he feels he should be getting on with the exhibit.

"Now, now!" he will say. "We come to the collection of Billy the Kid. Did you know that he was cock-eyed?"

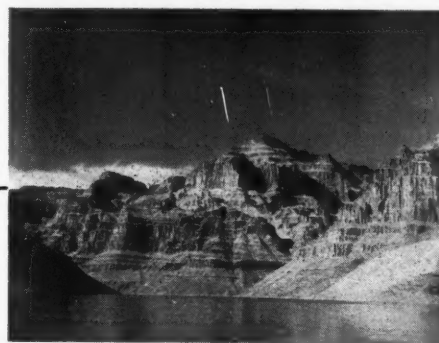
You had known that there was something askew in the psychical assemblage of a youth who killed 21 men without qualm.

But cock-eyed? The Count shows you an old photograph of Billy, the only one in existence of that particular pose. There, sure enough, you can see that one of the slim lad's eyebrows is arched high above the other. Then, after swiftly assuring himself that you are not cock-eyed, he will tell you that some physiognomists claim this mark to be a physical indication of the criminal mind.

Mr. Griggs treats alike casual visitor and avid connoisseur when they come to his museum. He welcomes school children when brought by their teachers. He quite won the hearts of a group of children from a girls' school who were brought to visit the museum. The day was cold and he had, temporarily, run out of fuel for his dying fire. Afraid the girls would be uncomfortable, he quietly went into the next room, broke a fine old chair to pieces, and they soon had a glowing fire.

He lives peacefully, gallantly in his ancient adobe town with his treasures and his memories.

"Come in, come in . . . Have you a little time? I should like to show you a few *other* things that I have here . . ."



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George R. Schneider (right) and a party inspecting garnets at Old Woman Spring.

They Call 'Em 'Rockhounds'

By HOWARD KEGLEY

THERE'S a new kind of prospector invading the desert regions of the West these days—and strange to say, gold is not the primary object of his quest.

He carries a prospector's pick, a sample bag on his shoulder and a magnifying lens in his pocket, but there is no placer pan in his kit—and nine times out of 10 he would not know how to pan gold if he found it.

You'll find his car and camping outfit—a more substantial lay-out than that of the old-time gold seeker—parked out along the desert byways. More than likely his wife and children will be roaming the hills with him.

This new prospector of the desert is a gem and mineral collector—seeking rare specimens of hard and colorful rock just for the pleasure he derives from his hob-

Among the many hobbies in which desert people engage there is none more popular just now than collecting rock specimens. Some folks gather them for their display cabinets—and others for rock gardens. Many collectors have their own equipment for cutting and polishing. For all of them it provides fascinating outdoor recreation—and the novices have just as much fun as the experts.

by. At home you will find shelves and perhaps showcases gleaming with rocks of many colors and forms—and he will glow with pride and enthusiasm as he tells you about them.

He belongs to the growing fraternity of "rockhounds." He and his kind are coming to the desert in ever increasing

numbers, because they have learned that no other field offers as abundant a supply or as wide a variety of specimens as the arid region.

And yet, despite the fact that these collectors have been exploring the desert in increasing numbers during the past decade, they have scarcely begun to tap the great wealth of material available on and just beneath the surface.

New gem and mineral societies are being organized all over the West. Los Angeles has four or five of them, and California now has a strong federation of state societies numbering many hundreds of active members and representing 16 of the principal cities of the state.

Disclosing the popularity of this hobby a Los Angeles mineralogical group several months ago secured permission to explore a large cattle ranch 100 miles from the city. The leaders estimated that about 30 members of the society would

join the field trip. When the day came 212 collectors arrived from all parts of Southern California. As a result, the rancher had to call in most of his cow hands to ride herd on the rock hunters and make sure they did not accidentally burn off his range.

Last Easter Edwin Van Amrindge of Pasadena Junior college headed a caravan of about 25 cars, which took an eight-day jaunt clear across Arizona and into northern Mexico, collecting a wealth of new and interesting material.

This group camped out three nights in heavy downpours, but came home with great enthusiasm for a similar trip next year. The party took along equipment for printing a mimeographed daily newspaper containing information concerning the route and places of interest.

These tours are not devoid of their lights and shadows of human emotion. Nearly always there is someone who is delighted or disappointed over the fruits of the chase. Last May a party of students from the extension division of the University of California at Los Angeles went on a collecting jaunt to the gem mines of the Pala district.

There they were joined by mineralogists from towns in San Diego county. Among them was A. Livingston from Oceanside. He had for six years been seeking a smoky quartz crystal, and it was his good fortune that day to almost stumble over a specimen of rare beauty. It was nearly 16 inches high. Radiantly happy over his discovery, he stood that huge crystal up on its blunt end and hurried to other members of the party in search of a camera to permanently record his find at its source. Imagine his disappointment, upon returning, to find two small boys energetically hammering away, with a sampling hammer, at the pointed end of the specimen. They had



Members of Los Angeles Mineralogical society on field trip near Red Rock canyon, California.

battered it so badly it was almost ruined.

Once in a blue moon someone discovers a mineral specimen never before catalogued. Such finds are cause for great rejoicing among the gem hunters. Such an unexpected strike gave Zolarite its place among western minerals and brought a small measure of fame to Mrs. Zola Barnes of Los Angeles, for whom it was named.

Mrs. Barnes went specimen hunting in the Gold gulch district of Nevada with her husband and Joseph D. O'Brien, who acted as guide. They were searching for opalescent silica which O'Brien had seen there 30 years earlier. Zola Barnes went prospecting on her own, up a little side

canyon, and soon returned with a specimen the unusual beauty of which at once turned their attention away from the search for silica.

Tracing the origin of the beautiful piece of drag material they finally discovered a small outcropping fault where they collected 300 pounds of the material which is described by the Pacific Mineralogist as "intensely silicified and chalcedonized alternating bands of red rhyolite and white chalcedony, exceedingly hard, homologous, and highly consolidated. The banding is not only horizontal, but is also found in concentric forms of striking character."

Now and then someone in search of



Pacific Mineral Society at Tejon ranch. G. E. Baxter photo.

queer or spectacular mineral formations discovers a mine. This was the experience of Harry Newitt and Dr. Norman Smith of Los Angeles. They went prospecting one day in the Palos Verdes hills near Los Angeles harbor, and ran onto a gigantic deposit of gorgeous barite crystals.

Hastening back to Los Angeles with an array of samples they sought the owners of the land and informed them that they had discovered a fortune on their holdings. Imagine their dismay when the owners informed them that they would not open a mine there for a million dollars, because they were marketing those hills as a high class residential subdivision.

One never knows what will turn up on a collecting trip. Blanche L. Anderson of North Hollywood went out into the Bodie district of Nevada in search of that mottled green rock which gave Bullfrog its name. Back in the gulch she picked up a sparkling specimen which she thought she might place on the mantel. When she stopped at a crossroads store several prospectors examined the chunk of ore and then struck out for the hills as fast as their legs would carry them. She learned later that the specimen contained \$30 to \$50 worth of gold.

There isn't a square mile in the southwest, collectors say, which is incapable

of yielding some gem or mineral specimen worthy of being made into a jewel for personal adornment or of being preserved in a private collection of minerals.

In order to acquaint the public with the almost unlimited possibilities of mineral collection, from an ornamental and utilitarian as well as from a recreational standpoint, the Engineers Club of Los Angeles, of which Dr. John Herman is president, recently announced that it would sponsor a Western Mineralogical Exhibition at Los Angeles this winter.

According to preliminary announcements made by Dr. Herman, the display, which will be the first of its kind ever attempted, will be housed in the basement of the Los Angeles chamber of commerce building, where half a city block of space is available, and will be open from January 13th to 19th inclusive to all persons interested. There is to be no admission charge.

Sponsors of this exhibition expect it to present mineralogically everything west of the Mississippi river. It will feature some of the finest private collections of mineral specimens in the west, including 10 tons of petrified wood, and possibly Kent Knowlton's rockiest meal in the west, a table set with mineral specimens which represent all of the food which might be found in a seven-course dinner,

together with the salt and pepper and the relishes. These items were all collected by Knowlton from the Randsburg district.

To make the exhibition educational as well as entertaining the committee in charge has arranged for a number of industrial exhibits which will feature asbestos, diatomaceous earth and borax from the raw material to the finished product.

29

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Writers of the Desert . . .

FRANK DUNN, whose wild animal zoo is featured in this number of the Desert Magazine, is an artist who commutes back and forth between Hollywood and his home at Baldwin, N. Y. He is 38 years old, has a wife and family, and plays ping-pong for indoor recreation—in fact he has some back east championships in this sport. He has the distinction of being the only artist whose work has ever appeared in Readers Digest, nine of his caricatures from the old magazine Vanity Fair, having been reproduced in the RD.

One of HOWARD KEGLEY'S favorite pastimes is motoring over the country sampling the various kinds of mineral water that comes from the springs. "People suspect I am seeking the fountain of youth," he explains, "but I am not. I simply get a kick out of drinking mineral water, not because I think it does me a darned bit of good, but just because I get a kick out of drinking it."

Howard, whose story about the "Rockhounds" appears in this issue of the Desert Magazine, is a newspaperman. He has no background of technical training outside his own profession, and yet he is a leader in some very technical organizations. For instance, he is closing his third term as president of the Mining Association of the Southwest, and is president-elect of the Engineers Club of Los Angeles. He is a member of the Mineralogical society of Los Angeles.


His principal hobby is rambling over the desert Southwest adding to his collection of Indian arts and crafts. He is an inveterate hobbyist, and his interests include stamps, cacti and mineral specimens.

He has written fact articles for more than 200 magazines—does his feature writing at home in longhand on a lapboard, and it is all done outside of his regular working hours as a newspaper reporter.

In condensing the story of Po-pé and the New Mexico Indian revolt of 1680 into a historical article of less than 2,000 words, HOPE E. GILBERT has done a skilled bit of reporting and writing for readers of the Desert Magazine this month. Mrs. Gilbert's hobbies are archaeology and Spanish and Indian cultures of the Southwest. In preparation for this and other magazine features she has written, she took her master's degree at the University of California under Dr. Herbert E. Bolton, and then spent two summers with the School of American Research in Santa Fe, New Mexico. She has contributed to the California Alumni Monthly, and to Touring Topics, before it became Westways. Her home is in Pasadena, California.

Out on the edge of El Paso—where the city ends and the desert begins—is a sprawling house with a patio and a flag-stone walk. And that is where MARJORIE BONIFACE entertains her friends and neighbors. "There's a mint bed along the flag stones," Mrs. Boniface explains, "and when we pass I make it a point to brush the leaves. I have observed that my friends are so tantalized by its pungent odors they fail to notice the discomfort of the wobbly chairs. I don't believe I could ever live happily again outside this land of sunshine and adobe."

Mrs. Boniface, author of this month's story about the Count of Old Mesilla, keeps house for her husband and 17-year-old son and writes on a number of subjects, but mostly about the desert. Her work has appeared in many publications and during the past year she has been working on a full-length book.



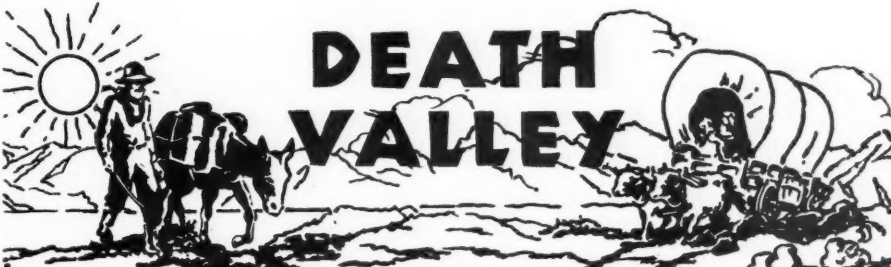
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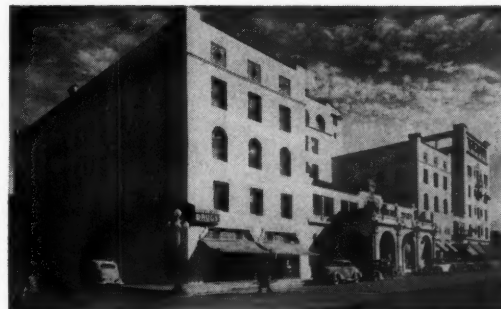
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ARIZONA

Tombstone . . .

It has been decided not to beautify famous old Boot Hill cemetery near here. In it were buried many heroes of this rip-roaring camp during its stirring history. Billie Clanton, Tom McLowrey and Tom's brother Frank rest there with a wooden slab marking their graves, "Murdered on the streets of Tombstone." Work among the graves will be limited to a general clean-up, following community discussion of a beautification program.

Flagstaff . . .

When George Andrakos, hotel employe at Grand Canyon, shot a coyote he was arrested, now faces trial in federal court at Prescott. Andrakos' target was semi-tame, had thrilled many tourists by practically eating out of their hands. In fact the coyote was so tame he sat often by the roadside waiting for motorists to stop and offer candy or cookies. Park service regulations prohibit killing any wildlife in a national park.

Tucson . . .

Rich treasures have arrived at the University of Arizona from a 20-room cliff house at Painted Cave in the extreme north-eastern part of the state. Scientists report the dwellings were occupied probably about the year 1250. Some of the rooms were badly demolished, others had walls decorated with large human and animal figures done in red, brown, white, green and two tones of yellow and black. Pictographs and hundreds of well-preserved handprints were found. Cliff dwellers there buried their dead in these cave rooms. Prize specimens included three mummies wrapped in beautiful burial robes, one exquisitely woven of feathers in which a child had been buried, another a patterned cotton blanket painted in four colors. After seven centuries the feather robe is soft and fluffy. Explorers of the site included representatives of the Amerind foundation and the state university: William S. Fulton, Hayden Fulton and Carr Tuthill of the foundation; Dr. Emil W. Haurv, director of the state museum; Arnold Withers and Edward Danson, university students, a cowboy cook and a Navajo interpreter from Fort Defiance.

Phoenix . . .

Application filed by the state of Arizona for preliminary permit from the federal power commission covering 18 projects for power and irrigation, has not been approved. Development of 5,000,000 horsepower of electrical energy was proposed, and plans would provide water for 4,455,000 acres of land in Arizona. Locations were listed as on the Colorado, Little Colorado, Verde, Williams rivers in Coconino, Mohave, Yavapai, Yuma, Maricopa, Pinal and Gila counties in Arizona and in Garfield, San Juan and Kane counties, Utah.

Prescott . . .

Many southwestern pioneers attended funeral services held November 8 for Mrs. Henry F. Ashurst, wife of Arizona's senior senator. Following high requiem mass in Sacred Heart church, where she had long been a devout worshiper, Mrs. Ashurst was buried in Mountain View cemetery here.

Chandler . . .

Not all scorpion stings are dangerous, according to Dr. H. L. Stahnke, professor of science at Mesa high school who says that most to be feared is a light-colored scorpion about two inches long, with venom more powerful than that of a rattlesnake. There have been 34 Arizona deaths from scorpion stings since records have been kept. Most of the victims were small children. A new serum produced by the Mexican government is said to be effective treatment. For first aid, Stahnke advised application of ice or something cold, if available; if not, gasoline or kerosene; do not slash the wound or apply a tourniquet; call a physician. Danger period comes about 10 hours after the sting.

Kayenta . . .

Saddle bags of beaded buckskin, 150-year-old souvenirs of an Indian battle between Utes and Navajo warriors were presented to Leo Weaver by Lee Bradley, Navajo interpreter. Bradley says his great-grandmother barely escaped with her life from the Indian battle, saving only the saddlebags. His grandmother, now a very old woman, believes her mother at the time of the fight was probably 30 years old. Although the buckskin is worn, the beadwork is almost perfect.

CALIFORNIA

Death Valley . . .

Death Valley Scotty has gone into the movies. A Hollywood studio announces Scotty has been signed as technical advisor for mining scenes of the picture "Virginia City," shot in the vicinity of Flagstaff, Arizona. The story tells of a group of southern people who left Virginia City, Nevada, in the troubled days of Civil war. Traveling in a covered wagon train, carrying gold they have mined, they are harassed by a renegade band. Big climax comes with rescue by U. S. cavalry.

Niland . . .

Three new beauty shops have been opened in this community on the edge of the desert in Imperial county. This is one indication of a current building and business boom due to construction work near here on the Coachella branch of the All-American canal. Mrs. Earle S. Henking, postmistress, reports practically all of 168 new mail boxes were applied for within a week after installation.

Bradley . . .

Revival of a salt industry on the shores of Salton sea is planned by Thomas Y. de Foor and Vern Moore of Mojave, California. They intend to recondition old vats, install new equipment, hope to work an area of 120 acres.

Palm Springs . . .

Pedro Chino, 126-year-old Cahuilla Indian, who remembered the "fall of the stars," a meteoric phenomenon which took place in 1833, died here November 25. He is believed to have been the oldest man living in United States. For many years he occupied a camp in Chino canyon, which was named for him. At the time of his death he was both medicine man and ceremonial chief of the Cahuillas.

The DESERT MAGAZINE

Ludlow . . .

Historic Tonopah & Tidewater railroad may suspend operations, says an order from the California railroad commission. Originally built to give Nevada and California mines an outlet to the coast, it extended from Tonopah to Ludlow. Ten years ago Death Valley Scotty and his partner A. M. Johnson bought 40 miles of the line from Tonopah to Tecopa and used the ties for firewood at Scotty's Death Valley castle. Eight years ago that section of the road from Ludlow to Crucero was abandoned. The line belongs to Pacific Coast borax company, has been used recently solely to give freight service to talc mine operators in northern San Bernardino and southern Inyo counties.

Coachella . . .

Up to 3 million pounds of substandard dates will be bought by the federal government for use in making stock feed, alcohol, brandy, crushed dates, date flakes and sugar. Coachella valley date growers association will buy the dates and the government will pay the association 3 cents a pound for purchases diverted to by-products.

NEVADA

Boulder City . . .

Almost 50,000 visitors were counted at Boulder dam during October, first month of the "travel year" for the national park service, according to figures released here. At the west entrance 64.80 per cent of the 49,259 travelers were checked and 28.07 per cent entered through the east checking station on the Arizona side of the dam. Through Pierce's ferry or at Overton the remaining 7.13 per cent arrived. Visiting hours for Boulder dam powerhouses: October 1 to May 1 daily from 7:45 a. m. to 8:15 p. m. and from May 1 to October 1 guides are on duty from 7 a. m. to 10:15 p. m. Tours are spaced at from 15 to 30-minute intervals, each tour lasting about 45 minutes.

Las Vegas . . .

Southeastern Nevada has one of three sanctuaries in the United States to protect desert bighorn sheep. Known as the desert game range, it is located in Sheep mountains near here. Other bighorn refuges are the Cabeza Prieta range and the Kofa range in southwestern Arizona. With recent transfer of 23 Rocky mountain bighorns from Moiese, Montana, to the Hart mountain antelope refuge at Klamath Falls, Oregon, a trip of 800 miles, U. S. biological survey reports bighorn sheep on five national wildlife refuges, in addition to the three sanctuaries for desert bighorns.

NEW MEXICO

Albuquerque . . .

G. A. Trotter has worked with the American Indians 35 years. With that background he feels qualified to deny that the Indian is lazy. "They are pretty much like their white brothers," says Trotter, retiring after three and a half decades of Indian service. "Some are lazy, some are thrifty; some are leaders, some are followers, but the idea that they won't work is fallacious."

Santa Fe . . .

For the 1940 Coronado Cuarto Centennial a souvenir map of New Mexico is planned by Joseph Bursey, state tourist bureau director. Paths of famous explorers, cattle trails, old stage lines will be marked, indicating routes of Coronado, Escalante, Cabeza de Vaca, Espejo, Oñate and the 49ers; the Santa Fe, Butterfield, Goodnight-Loving, Jim Stinson, Comanche and Chisum trails.

Taos . . .

New Mexico's piñon harvest this year is said to be small, and according to superstitions of Utah Indians this means the winter will be short and mild. But in the Grand Canyon country of Arizona the piñon nut crop is one of the largest in history. Forest service officials say the Indians believe a good piñon crop foretells a long, cold winter. A good crop is harvested about every three years, frequency determined by weather and infestation of cone weevils and other insects.

Socorro . . .

Five witnesses saw Siebert Bonner kill a deer barehanded. Bonner was hunting in Sawmill canyon when one of his companions, J. F. Jackson shot a deer on top of a nearby hill and Bonner climbed up to get the animal. As he made ready to carry the deer away another deer appeared and attacked him. "I grabbed him by the horns when he rushed at me," Bonner said. "While bulldogging him I picked up a rock and hammered the deer's head until it was dead."

Silver City . . .

Sid Coker, hiking along Turkey creek in the Black range near his home in November stumbled over a rifle. The piece was rusty. In the stock he found a hunting license issued to Al Wood 42, of Los Angeles in 1926. As Coker held the gun in his hands, wondering about the history of the weapon and its 13 years on the mountain-side, a seven-point buck wandered down the trail. Coker raised the rifle, aimed, fired and shot the deer through the heart.

UTAH

Moab . . .

Largest soil conservation district in the state has been established as result of an election held in Greenriver. New district includes 1,520,000 acres, extends 66 miles north and south and 36 miles east and west. It tops in size the Price river watershed district by 303,000 acres.

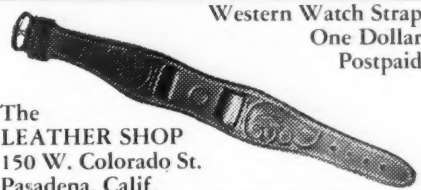
Fillmore . . .

L. A. Wynaught of this city is new president of the Associated civic clubs of southern Utah. Other officers elected at the annual meeting held here: Henry D. Jones of Helper, first vice president; George M. Hunt of Bicknell, second vice president. Executive committeemen: Chauncey Sandberg, Hurricane; J. W. Humphrey, Ephraim; Russell Hawkins, Nephi, and Daniel Stevens, Fillmore.

COLORADO

In Durango, Colorado, old-timers, agricultural experts and archaeologists are debating claims that crops of corn grew from seed taken from prehistoric Indian ruins. R. B. Kinlick proudly showed in his garden mature corn of blue and white variety with extremely hard kernels. He said the seed corn came from Aztec, New Mexico ruins in 1903. Farm advisors and Paul Franke, superintendent at Mesa Verde national park were skeptical. Agricultural authorities doubted that corn would retain fertility so long. Franke didn't believe corn had ever grown from seed taken from any ruins. Kinlick found support when Mrs. Ella McLellan asserted she had grown corn and squash from seed taken from Mesa Verde ruins in 1898. Her husband, Peter, in company with one of the Wetherills, she said, found the corn and squash seed in a broken olla.

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THE *Desert* MAGAZINE

636 State St. El Centro, Calif.

SMUGGLER'S CAVE For the most informative story about Smuggler's cave, the cavern shown in the accompanying picture, the Desert Magazine awarded first prize of \$5.00 to Sam H. Bryan of San Diego. This contest was announced in the November number of the magazine, and many excellent manuscripts were sent in for the judges to consider. The winning story is published on this page.



By SAM H. BRYAN

IN the southeast corner of San Diego county, California, high up on the rim of the desert, is Smuggler's cave, the place pictured in your November landmark contest.

To reach the cave it is necessary to climb a trail which snakes its way up into the rugged desert mountains a distance of over two miles from the end of the automobile trail. To reach the beginning of this trail the motorist should follow Highway 80 approximately one mile south of Boulder Park, or coming from the other direction, five miles east of Jacumba. Leave the pavement at a point opposite and due east of the mica mines which are plainly visible against the foot of the mountains on the west side of the road. From this turnoff point it is about a quarter of a mile to a small rocky knoll where the car may be parked.

The faint trail to Smuggler's cave follows a southeasterly direction from this point. The cave evidently is windblown, in a large granite boulder. The back end of the cave, which is about 30 feet from the entrance, is blocked with small boulders. Broken pottery and grinding holes remain as evidence of the Indian occupation.

The first recorded incident calling attention to this cave was when the Gaskill brothers at the old Campo store were held up by bandits. The holdup resulted in a gun fight, and one of the bandits escaped with a slug in his shoulder. A posse tracked him to Smuggler's cave and shot him as he came out. A painter, hearing

of the incident, went to Smuggler's cave and sketched a picture of the scene, with the outlaw lying in front of the opening. Mrs. G. F. Haeussler of Jacumba has an old blue photograph of this painting.

About the year 1900 and later, Chinese and opium were being smuggled across the Mexican border to the cave. The international line is only a short distance away. The smugglers and Chinese would camp here until the way was clear and then sneak down the trail. The federal government finally learned about this traffic and border patrolmen were sent to Jacumba. These "China catchers," as they are described by Mrs. Foster, Jacumba's first resident, soon broke up the smuggling activities.

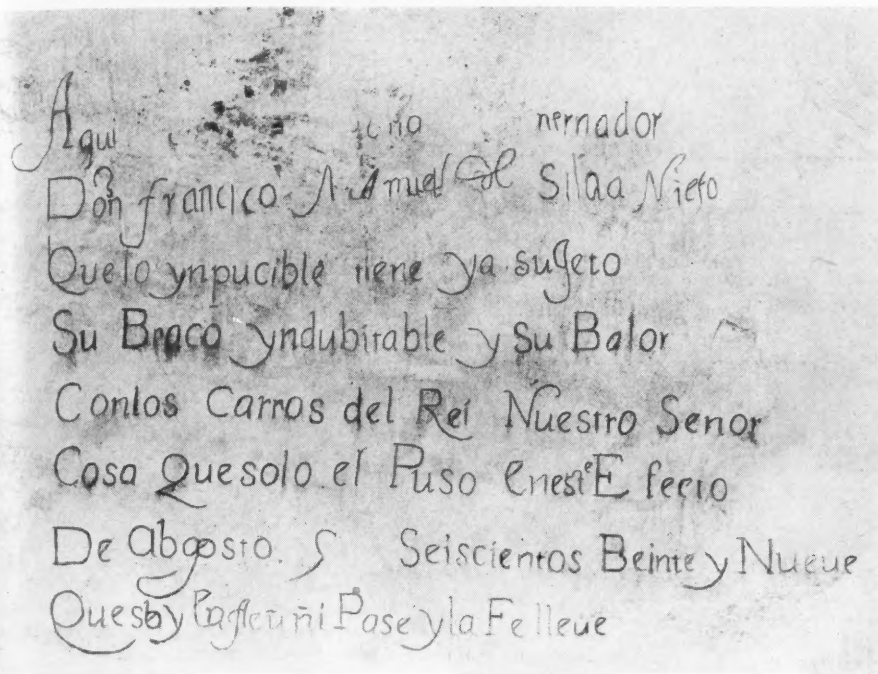
By 1911 Turso de la Toba, a border raider with a following of outlaws, was causing much trouble along the border. Both the American army and Mexican federals were after him. The American soldiers finally caught up with the gang near Jacumba and after a short fight Toba was routed. His tracks led to his hideout at Smuggler's cave. Toba and his men were not there but considerable loot was found, including saddles and bridles, sacks of beans, and a few horses. The outlaw caused no trouble along the border after that.

If Smuggler's cave could talk, it could tell some strange tales of those who have occupied its roomy interior—tales that would be recounted in at least four languages—Indian, Spanish, Chinese and English—and perhaps many more.

The DESERT MAGAZINE

Old Inscription in New Mexico

Who knows the story of this landmark?



Prize Contest

This month's Landmark contest will be rather difficult for those who flunked in the Spanish class at school. The photograph was taken in New Mexico at a famous location. Many readers will recognize it — even though they cannot translate the crude rock carvings.

In order that the readers of the Desert Magazine may know more about this ancient record—where it is located, by whom it was inscribed, and a translation of the words—a prize of \$5.00 will be paid to the writer of the most accurate and complete story of 500 words giving all available information.

Entries in this contest must reach the Desert Magazine office not later than January 20, and the winning story will be published in the March number.

PALM SPRINGS
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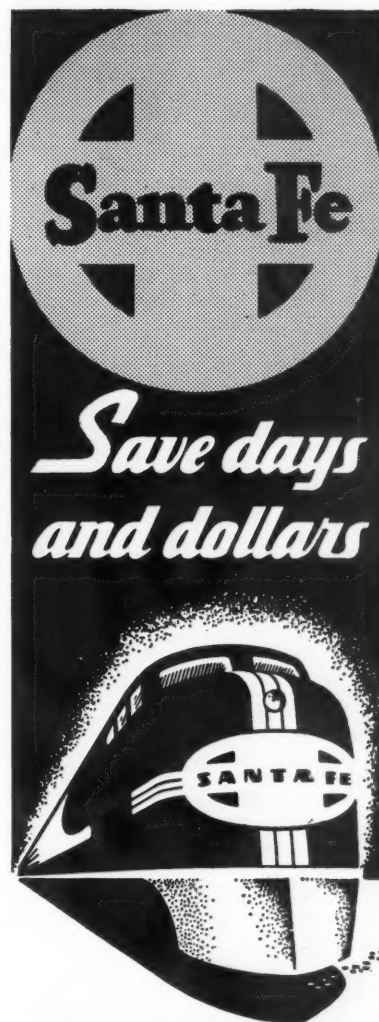
HANDY-MAN . . .

Continued from page 13

with shaggy reddish bark. Plentifully supplied with stout whitish thorns one-half inch more or less long. The rather thin foliage is blue-green, the leaves with eight to 18 oblong leaflets. The flower spikes, two inches or so long, resemble the Honey Mesquite's. The distinguishing feature is the curious pod, a slender cylinder of tightly twisted spirals, in clusters of as many as 20. Once I found one of 45. The wood has the same uses as Honey Mesquite, the pods the same prime value for meal and livestock fodder. It favors low-lying valleys, streambeds, sandy or gravelly washes, and the environs of springs, in the Colorado and Mojave deserts, Death Valley, Arizona and New Mexico. In the rich bottomlands of the Colorado river between Yuma and Ehrenberg Screwbean thickets and groves abound luxuriantly, in places resembling huge apple orchards. In plentiful numbers they follow the river to Needles.

Prosopis velutina

The Honey-Pod Mesquite, common in parts of Arizona, differs from the Honey Mesquite principally in its more erect growth, the crooked branches spreading widely from a short thick trunk in apple-tree fashion. The bark is grey, the foliage pale-green and the beans flat. It attains the finest growth on alluvial bottomlands in southern Arizona and the Colorado river delta.



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Gems and Minerals

This department of the Desert Magazine is reserved as a clearing house for gem and mineral collectors and their societies. Members of the "rock-hound" fraternity are invited to send in news of their field trips, exhibits, rare finds, or other information which will be of interest to other collectors.

—ARTHUR L. EATON, Editor—

**MIDWINTER FAIR OFFERS
PRIZES FOR MINERALS**

Acting on the suggestion of the Imperial Valley Gem and Mineral society, Secretary Dorman Stewart of the Imperial Midwinter Fair has announced that \$505.00 will be available as prizes for mineral exhibits at the annual exposition March 2 to 12, 1940, at Imperial county fairgrounds.

Exhibits must all come from Imperial county, and must be entered by February 26. Entry fee is 10% of the first premium. Following is the prize list:

Metals and Ores

	1st	2nd	3rd
Placer gold (display)	\$25.00	\$15.00	\$10.00
Lode gold specimens (display)	25.00	15.00	10.00
Gold bearing gravel	25.00	15.00	10.00
Lode gold ores	20.00	10.00	5.00
Silver or silver ores	20.00	10.00	5.00
Copper ores	16.00	8.00	4.00
Iron ores	10.00	5.00	2.00
Mill products (gold)	10.00	6.00	4.00

Nonmetallic Ores

Asbestos ores and products	10.00	6.00	4.00
Mineral fertilizer, analysis furnished	10.00	6.00	4.00
Magnesite	10.00	6.00	4.00
Soapstone and talc	10.00	6.00	4.00

Building Materials

Limestone and limestone products	10.00	6.00	4.00
Clay, specimens	10.00	6.00	4.00
Clay products (including bricks, pottery and tile and other products)	10.00	6.00	4.00

Gems and Jeweler's Materials

Uncut gem materials (best display not over 10 specimens)	10.00	6.00	4.00
Cut and polished gem materials (not less than 6 or over 12 specimens)	15.00	10.00	5.00
Petrified wood, polished specimens	10.00	6.00	4.00

The Prospectors club at Boulder City, Nevada has acquired a circulating library of books and bulletins relating to minerals and geology. Secretary Anita Scott is librarian and lends the books to members after the plan of a regular library.

According to collectors who have scouted the desert roads since the September cloudbursts, the Chuckawalla geode fields from both the north and south approaches are accessible only to desert equipped cars. The old roads are badly washed out in places and the trails are sandy and rocky.

With Emory John as guide, Mr. and Mrs. J. H. Belt and Frank Beckwith of Delta, Utah, recently explored a field in Millard county where they found black, red and brown obsidian, the latter being of rare coloring. They also found amethyst crystals in Miller canyon.

Misnamed Minerals

BLACK ONYX

"Black Onyx" or "Genuine Black Onyx" is the name applied to a stone commonly used in jewelry. Who has not seen lodge emblems, school emblems, even diamonds set on its glossy black background? This stone which the purchaser, and often even the dealer, believes to be genuine, is really only half so. Its base is colorless or white chalcedony, agate, or other silica. This is soaked for a long period in a saturated sugar solution. The porous stone becomes completely saturated with sugar. A second bath in sulphuric acid blackens the sugar, thus producing a very black stone. Simple cutting and polishing then provide the glossy stone of commerce.

**OVERNIGHT CAMP FOR
IMPERIAL VALLEY GROUP**

Imperial Valley, California, Gem and Mineral society, 37 strong, camped during the Armistice Day weekend 23 miles northwest of Twentynine Palms. They found a little-explored area some distance from the well known geode field, where fine specimens of calcite, agate, chalcedony, bloodstone and jasper were found. On December 16 and 17 the same group spent two days near Quartzsite, Arizona where chalcedony "roses" are unusually plentiful.

**KERN COUNTY SOCIETY
HAS INTERESTING SPEAKERS**

Jack Hare of Shafter addressed the Kern County Mineral society at their November meeting, telling his experiences on his recent trip to Mexico. Dr. Woodhouse, president of the Santa Barbara society and vice-president of the state federation was their December guest speaker.

**HOLLYWOOD MOUNTAINS
PROSPECTED BY ANGELENOS**

Los Angeles Mineralogical society visited the Hollywood mountains on their November 26th field trip, finding zoolites, fossil fish, calcite crystals, andalusite, variety chialstolite, gypsum, quartz pseudomorphs after fluorite. They plan to go to Death Valley over the New Year's holiday.

SPECIAL DATES

JANUARY 13-19—Western Mineralogical exposition chamber of commerce building, Los Angeles. Engineers Club will be host society.
APRIL 20-21—Annual convention of California Federation of Mineralogical societies at Santa Barbara, California.

"ROCK HOUNDS"

Rock hounds is queer animals. They was made to walk standin up strait, but when in action they doubles over, er crawls aroun on all fours. They all has exceptional clear eyesight, but also carries an extry eye in a pocket; this is used on all sides of every specimen. Also, as an aid to eyesight, they licks things with their tongues, regardless of dirt, germs er pizin. They drapes their-selves with sacks to carry home their plunder in, an sometimes can scarce stagger under its weight.

A mere whisper to rock hounds about availlible material is jest like a red flag to a bull. They chases it. It don't make no matter if it's rainin er freezin er so hot that nails melt outta boards; if rock houns hears about somewheres they kin find new and diffrent rocks, they travels there pronto. An it don't make no diffrence neither if it's hundreds of miles away; they jest go. They hunts in packs er alone. Sometimes they takes their wimmen along; even some wimmen is rock houns too! When on the scent they never stops till it gets too dark to see, and then they talks about what they've found till about day-light an time to take the trail agin.

GEM MART

Advertising rate 8 cents a word,
\$1.60 minimum an issue.

GEM MINERALS POLISHED. Large specimen sawing and polishing. Southern California mossagate for sale. Prices reasonable. George Ashley, Ramona, California. Take 3rd St., drive 1 1/3 mile, turn left and drive 1/2 mile.

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DO YOU KNOW THAT TURQUOISE—

—is sometimes boiled by unscrupulous persons in oil, mutton tallow, paraffin, or bacon grease to give a good color to soft stones? This treatment can be detected by smelling the stone, by holding the stone so that the heat of the hand will cause the oil to seep out on the hand, or as reported by Arthur Woodward in his interesting book, "Navajo Silver," by passing a suspected stone through the flame of an alcohol lamp. This draws the oil out and if not genuine, carbonizes the stone.

—although the standard gem of the Tibetans, is almost unknown in China? A few carvings of turquoise have been made for the Chinese upper class. One of the largest single pieces known, eight by six by six inches, was intricately carved by a Chinese artisan to represent a miniature hillside with tiny houses, trees and figures.

—is called jews-bóo'-shé by the Hopi, which means simply "blue stones"? Used in many ceremonials, it is also glued on small fetishes in the shape of small animals to bring good luck in the chase.

—is offered by the Navajos to Bead spring, New Mexico, with the prayer that they will obtain an abundance of the stone? Little systematic mining is done by the Indians. They receive turquoise in barter with the traders, find it in old ruins, or it is handed down by their elders.

—mines on Sinai peninsula, between Asia and Africa, are the oldest turquoise mines known? They were worked by the Egyptians, who erected a temple to the goddess Hathor, divinity of Turquoise Land.

—in a single block weighing 320 carats and worth \$2600 was found in Searchlight, Nevada, in 1909?

—was called "turkey stone" in English, "turchois" in French, because the European supply came from Persia through Turkey?

—sold in Europe is often found to be fossil bone impregnated by copper and iron?

The terms "occidental" and "oriental" came to describe inferior and good stones, respectively. "Old rock" and "new rock" were also used to distinguish between grades of turquoise. That of the "new rock" was soft and lost its color soon after being mined.

IDENTIFICATION SERVICE

As a special service to Desert Magazine readers, Arthur L. Eaton will identify rock and mineral specimens sent to him when return postage is enclosed. This does not include chemical analysis, however. There is no charge for this service. Address Arthur L. Eaton, Box 353, Holtville, California.

On a recent trip to Horse creek and Iron mountain region, members of the Cheyenne, Wyoming, geology club found in the Pierre shale of upper Cretaceous age two fossil sea urchins. According to Dr. Thomas, paleontologist at the university of Wyoming this is the first Cretaceous urchin he has seen from Wyoming.

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Desert Place Names

Magazine is indebted to the research work done by the late Will C. Barnes, author of "Arizona Place Names;" to Betty Toulouse of New Mexico, to Margaret Hussmann of Nevada and Hugh F. O'Neil of Utah.

CALIFORNIA

DOS PALMAS

Imperial county
Dos Palmas was a watering place in the early days on the old Bradshaw stage road to Ehrenberg and was the site of a stage station whose ruins still stand near the spring (Desert Magazine Dec. 1937 p9, Dec. 1938, p11). The name is Spanish, but is locally corrupted to "Dos Palms." There is a spring near the center of a low area bordered on the west by clay hills, on the north by the precipitous towering slopes of the Orocopia mountains and on the east by a gradually rising plain interrupted by the Chocolate mountains. Southward an opening leads to the Salton sea, although scattered low hills in that direction almost isolate the basin and give it the appearance of a separate depression. At Dos Palmas there is an acre or two of rank vegetation, including grass, tules, mesquite, some willows and a clump of five palms in addition to the two isolated palms that give the place its name. A cabin is near the spring, and from a pipe there is a generous flow of warm artesian water. The old spring issued from the ground at a temperature of about 80 degrees. The Orocopias rise in the background, steep and black, culminating in one dark rounded summit probably 3,000 feet high, conspicuous throughout most of the Salton basin. For many years Frank Coffey, veteran prospector of the Colorado desert, lived at Dos Palmas, and from that base explored the nearby ranges with his burros, one of which he called "Mrs. Coffey." Frank died a few years ago, said to have been about 90 years old at the time of his death.

ARIZONA

APACHE CAVE

Maricopa county
Sometimes called Skull cave. On north side Salt river above Horse mesa dam. In 1872, troops under Major Brown, U.S.A. practically wiped out a band of Apaches who took refuge here. Soldiers could not charge the cave but fired volley after volley against its sloping roof which is still splashed with lead from the bullets. The deflected bullets did deadly work. For many years there were skulls, human bones, old shoes, clothing, cartridge shells and such plunder, lying in the cave.

BRIGHAM CITY

Navajo county
Small hamlet west side Little Colorado two miles north of Winslow. Started by a colony of Mormons under Jesse Ballenger in 1876. First called Ballenger. In September 1878, changed to Brigham City, "in honor of the first president of the church." The Mormons built an excellent stone fort here which was torn down and had entirely disappeared by 1884-85. There was once a small pottery factory here which turned out a very fair grade of crocks, bowls and other such articles, says Barnes. In January 1879, place had a population of 277. There was a water power grist mill here, built in 1878, which was later hauled to Woodruff, but never rebuilt. The old machinery lay in a heap near Woodruff many years. Brigham City was abandoned in 1888 by all but one or two families. It was a small station on the historic Star route mail line between Santa Fe and Prescott, the stage line swinging by Brigham City and thence west through Sunset pass. The grist mill mentioned was donated by

For the historical data contained in this department the Desert

the Mormon church authorities in Utah "to the settlements on the Little Colorado river in Arizona. The church sent it by teams to Lees Ferry and the Arizona settlers sent there for it and hauled it to Brigham City where it was set up and began turning out flour May 23, 1878," according to Fish.

NEW MEXICO

HILLSBOROUGH

Sierra county
Hillsborough's name was drawn out of a hat. The community was founded in 1877 as a mining camp. Each newcomer had a name for the new town and in December 1877 all the suggested names were written on slips of paper, the name chosen was first drawn after suggestions were placed in a big sombrero. It was in 1876 that David Stetzel and Daniel Dugan started out from Georgetown, New Mexico, on a prospecting trip and they were still prospecting in May of the following year when they discovered gold in the present Hillsborough camp.

FORT BAYARD

Grant county
Fort Bayard was named in honor of Capt. George D. Bayard of the 4th U. S. Cavalry and brigadier general of volunteers, who died December 4, 1862. The fort was established August 1, 1866 on the site selected by Inspector General H. H. Davis. It was first occupied by Company B, 15th U. S. colored infantry under command of Lieut. James M. Kerr. By direction of the secretary of war, the surgeon general of the army was authorized to establish there a general hospital, which is today one of the most important hospitals maintained by the United States government.

NEVADA

WELLS

Esmeralda county
Elevation 5,629 feet. Named after Humboldt Wells as they are called. They are really springs, about 30 in number, situated mostly in a low basin half a mile west of the station. From the nature of the porous soil around them they do not rise and flow away as do similar springs in more compact soil. They are called bottomless, but since no accurate knowledge has been published in regard to their depth, it is more probable that this statement is a fallacy. Wells was a great watering place in times of the old emigrant travel, and at least three of the important overland routes converged at this point and united here. It was a favorite camping ground for emigrants. Later it was inhabited mostly by railroad people. Today it is a farming community. The springs abound in fish.

UTAH

RECAPTURE CREEK

San Juan county
Named by Peter Shirts in 1879, after a dream in which he saw Cortez, the Spanish conquistador, recapturing Montezuma at this place.

WENDOVER

Tooele county
Derived its name from an old Anglo-Saxon word, "wenden" meaning "to go" or "to wind." This name was chosen because at this point the Western Pacific railroad begins winding westward toward the Sierra Nevada mountains.

The DESERT MAGAZINE

Mines and Mining. .

Ajo, Arizona . . .

Irish Mike Curley, ruddy mining pioneer and central figure in development of this, "the biggest mining camp in the United States," will quit his job as manager of the New Cornelia branch of Phelps-Dodge corporation December 31. C. R. Kuzell, formerly superintendent of P-D United Verde smelters at Clarkdale, will be New Cornelia head after that date. Curley came to Arizona 26 years ago with Gen. John C. Greenway. Thousands of mine workers know Mike as "the boss," have gone to him with their personal problems, too. Welfare organizations interest him. Notable among community projects identified with his name is the annual Christmas party for children of Ajo. Curley talks little about himself or his plans, but it is said he will make his home at Westwood, California, with his wife and two daughters.

Phoenix, Arizona . . .

Want to buy a mine? State department of mineral resources has listed 300 available properties, giving details of each prospect or mine, in attempt to bring together owners and buyers or developers. Listings run all the way through the alphabet, from amblygonite to zircon.

Washington, D. C. . . .

Dust of the desert will gather on the homes of workers in the American copper industry if copper duties are reduced in proposed trade agreement with Chile, Senator Ashurst of Arizona warned in an appeal against tariff cuts. Declaring 500,000 employees are dependent on domestic copper mining for livelihood, he predicted widespread unemployment would follow lowering of duties on the red metal. Senator Hayden of Arizona and Samuel Morris, chairman of the Arizona copper tariff commission, appeared with Ashurst at a hearing before the committee for reciprocity information. The Chilean pact would reduce copper excise to 2 cents per pound, from the present rate of 4 cents on foreign copper.

Carlsbad, New Mexico . . .

Union Potash & Chemical company announces plans to install here a 2,000-ton flotation mill, expecting annual production of 70,000 tons of potassium sulphate and the same quantity of muriate of potash. R. W. Mumford, consulting engineer for American Potash & Chemical corporation at Trona, California, is quoted as citing the old Union plant as one of three capable of expansion to make the United States independent of foreign potash supplies. In 1938 this country produced 316,951 tons, exported 51,800 tons, imported 193,609 tons. Use, mostly in agricultural fertilizers, has risen from 270,000 tons in 1913 to 400,000 tons in 1938.

Glenwood, New Mexico . . .

A large tonnage of tin ore has been blocked out in a group of claims held by the Colorado-New Mexico tin corporation here, according to local reports, and the company plans to put up a 50-ton mill.

Reno, Nevada . . .

War metals have come to the front in Nevada mining activity. Capital has turned its attention to quicksilver and tungsten, with increasing production of mercury in Bottle creek, Ivanhoe and other old districts. Installation of furnaces is underway at the Cahill property near Paradise valley and at the A. & B. group northeast of Tonopah, where San Diego people are active. In other locations vigorous development is reported. Nevada operators believe the state will rank third in American output of quicksilver within a year, led only by California and Oregon, if the market holds up.

Las Vegas, Nevada . . .

Eighty-five-year-old Ben Hubbard prospected the Black hills nearly half a century, searching for gold. In November this year he found a ledge in George gulch on Newton creek, a discovery reports say may prove to be fabulously rich. Samples are said to assay close to \$200,000 per ton.

Winnemucca, Nevada . . .

Advance in price of tungsten and demand for manganese led to development of deposits at Golconda hot springs by the Nevada Massachusetts company. Process for extraction of both metals has been worked out by the company, which has exposed a substantial tonnage of fair grade ore. At Mill City the Nevada Massachusetts company employs 125 men and is milling 250 tons of tungsten ore daily.

Goldfield, Nevada . . .

Prof. Jay A. Carpenter has been appointed acting director of the Mackay school of mines and head of the Nevada state bureau of mines. He succeeds Dr. John A. Fulton, who died recently in San Francisco.

Winterhaven, California . . .

Work has been suspended indefinitely on a big concentrating mill at the property of the Picacho gold mining company, north of Picacho peak on the California side of the Colorado river near here. After several months of activity, order to stop came from the parent corporation, Nipissing mining company of Cobalt, Ontario. Uncertainty due to European war is responsible for the Canadians' decision.

Tucson, Arizona . . .

Arizona's rich mineral lands might just as well be in the moon as far as future development is concerned unless the department of the interior and the Indian bureau reverse their policies, Dean G. M. Butler of the Arizona U. school of mines said in an address before the annual convention of Arizona small mine operators. Dean Butler hit at "insolent Washington bureaucrats" he blamed for mineral land withdrawals, which he said are made by proclamation, often on secret orders, without telling miners and others interested.

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illusive blues and silken brilliance on canvas.
Others (too many!) will vainly carry to their
city homes branches of wild pungent shrubs
and fragile bloom—destined next morning for
the trash heap.

Lester Rowntree, well known horticultur-
ist, landscape gardener and writer, in her new
book tells nature lovers how to "bring them
back alive" — and legally. FLOWERING
SHRUBS OF CALIFORNIA and Their Value
to the Gardener was off the Stanford Uni-
versity Press in October. It is 300 pages of
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ing about the state, exploring virgin fields in
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sense of humor. And she always brought back
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tic pupil. The lesson ended when she kept a
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day's receipts if she sold all her pots to a
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The DESERT MAGAZINE

Weather

NOVEMBER REPORT FROM
U. S. BUREAU AT YUMA

Temperatures—	Degrees
Mean for month	66.5
Normal for November	62.4
High on November 1	89.
Low on November 30	45.

Rain—	Inches
Total for month	0.19
70-year average for November	0.29

Weather—	
Days clear	21
Days partly cloudy	4
Days cloudy	5

Sunshine 85 per cent, 267 hours of sunshine out of possible 314 hours.

Colorado river—November discharge at Grand Canyon 334,000 acre feet. Release from Boulder dam 714,000 acre feet. Estimated storage November 30 behind Boulder dam 23,090,000 acre feet.

JAMES H. GORDON, Meteorologist.

FROM PHOENIX BUREAU

Temperatures—	Degrees
Mean for month	64.3
Normal for November	59.7
High on November 1	89.
Low on November 30	45.

Rain—	Inches
Total for month	0.75
Normal for November	0.70

Weather—	
Days clear	13
Days partly cloudy	10
Days cloudy	7

G. K. GREENING, Meteorologist.

SNOW CLOSES TRAIL

According to the report of Highway Engineer Roy Holland, an 18-inch snow December 1 and 2 closed the Coronado Trail highway in Arizona between Cedar Flats and Beaver-tail lodge.

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- 3—Escape persecution.
- 4—Antelope clan.
- 5—Topock.
- 6—Historical inscriptions.
- 7—Bottom of Grand Canyon.
- 8—Lieut. Beale.
- 9—Geodes. 10—Basketry.
- 11—Salome. 12—Bandelier.
- 13—In sandy washes.
- 14—De Anza.
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DESERT
A HAYWIRE HISTORY OF
THE BORRERO DESERT
BY HARRY OLIVER



By RANDALL HENDERSON

S EVEN-YEAR-OLD Bruce Cruze wandered for six days, lost in the rugged wilderness of northern Arizona. When they found him he was hungry and tattered—but otherwise little the worse for the experience.

For several years I have been keeping a file on these lost youngsters from four to 12 years old, who periodically wander away from their guardians—and almost always are found alive and well after an ordeal that would bring death or insanity to a city-bred adult.

Any student of nature can tell you the answer. We are born with an endowment of vitality and adaptability that equips us well for survival in our natural environment. And then we spend most of our lives trying to create ease and luxury for ourselves—and to the extent that we succeed in attaining our goal, we bring about our own decay.

The traits we admire most in the American Indian are those which come from his close association with nature, and by the rigid discipline he enforces upon himself. But it really is not necessary that we remain savages in order to keep close contact with nature — and enjoy the benefits that come with such association. Civilized folks can have most of the comforts of their civilization and still retain their native endowment of stamina if they are willing to discipline themselves to that extent.

I like to meet city hikers out along the desert trails. They are the kind of people who, perhaps subconsciously, are striving to retain those God-given gifts which made it possible for that 7-year-old boy to survive six nights of freezing temperatures in the desert wilderness.

A letter just came from my good friend H. E. W. Wilson of Glendale, California. He is making preparations for one of his periodic excursions to the desert in quest of the Lost Pegleg mine. Off and on since 1900 he has searched the Southwest for old Pegleg Smith's hill-top of black-gold nuggets. I hope he finds the lost treasure—he has clung to his faith in the Pegleg story for 40 years—while others scoffed. But whether he locates the gold or not—his trip to the desert will not be in vain. H. E. W. is getting along in years now and the desert sunshine and the quiet and relaxation of those evenings around the campfire will be a beneficial change from the hurly-burly of the metropolitan zone.

Every few weeks some one sends me a copy of that classic among desert poems, "Mornin' on the Desert." The poem, when reprinted, always carries the explanation, "Found written on the door of an old cabin in southern Nevada."

I would like to know the story back of those verses—who wrote them on the door, where was the cabin located, and who found them there? Also, is there a photograph of the

cabin and the door? I know there are many Desert Magazine readers who would be interested in this information—and I would like to pass it along to them if some one can tell us the story.

Or, perhaps I am wrong. Maybe we should just leave those beautiful lines framed in their background of mystery. I have wanted to reprint the poem in the Desert Magazine. It properly should be accompanied by some art or illustration—but it would seem almost a sacrilege to use other than the true setting of their origin for illustrative purposes.

* * *

The flower display this fall has been gorgeous — but I wondered if freezing temperatures during the blossoming period would be disastrous to the new seed crop—and thus deprive us of a normal display during the next few seasons.

But it seems that wise old Mother Nature solved that problem long ago. From Dr. Maris Harvey, formerly of the Desert Laboratory at Tucson, I learned about the theory of delayed germination.

Dr. Harvey told me of the lowly cocklebur. Normally there are two seeds in the pod—one of which will germinate the next season, and the other not until two or three or many years later. One of the seeds, the smaller one, has a thicker shell which is impervious to moisture or oxygen. The thin-shelled seed germinates the first season—the other not until time and the elements have destroyed the water and air-proof outer hull. It may require years.

Thus the perpetuation of the species is assured. On the desert where moisture is a very uncertain element, a large percentage of the seeds are created for delayed germination.

And so the Weather Man may go ahead with his strange pranks—there'll always be seed in the desert sands awaiting the time when conditions are ready for the life germ to start its new cycle.

* * *

Thanks to Olin J. Bell of San Francisco, I am now a full-fledged member of the Golden Gate Jasper club. This club has no president nor does it collect any dues, but I understand it is a very exclusive affair. It seems that when workmen were excavating deep in the mud of San Francisco bay, trying to find bedrock for Golden Gate bridge, they brought up a piece of rather colorful jasper—only a few pounds of it. Of course the collectors all wanted a specimen—since it is the only gem rock that will ever come from that spot.

I'm glad Olin sent me a little piece from his cabinet. Next time one of these desert rockhounds comes around displaying a beautiful specimen of something or other that makes my modest little collection look like stones from a gravel-pit, I'll just say "phooey" and bring out my Golden Gate jasper—all dolled up in a plush jewel case.

LETTERS

National City, California

To the Broken Glass Editor:

While following the Rainbow Trail across the Arizona desert we picked up a wide-mouthed fruit jar. It must have lain there in the sun a long time because it had turned a beautiful shade of purple.

Later on, I filled it with salt. And what do you think happened? The jar had turned white and the salt had absorbed the color.

Can any of your readers offer an explanation?

I have some pieces that we found on our travels and they are really beautiful.

FLORENCE A. BRUNKE.

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On the Outskirts of Calico,
in a gypsy trailer

Editor Desert Magazine,

Dear Sir:

Three years ago my doctor warned me to get outside and stay outside if I wanted to live. Well, being an ordinary sort of a person I had no mad desire to die, so my sister and I bought a trailer house fully equipped for camping and started out. In our wanderings we passed through all but four of the states in the U. S. A. and spent several weeks in old Mexico, one summer in Canada.

But I think we agree on one thing that Calico was one of the pleasantest surprises we have had on our long trip.

We had stopped in the little town of Barstow to eat when we noticed a card with the words "Visit Calico, famous ghost town," printed on it. We inquired as to the location of this "ghost town" and were pleased to find it was only a 20-minute drive over roads not at all bad. So we started out to see the sights. We had expected to find a really deserted mining camp, and you can imagine our surprise to see on the front of one of the old adobe houses, the sign "Calico Mineral Exhibit." We entered somewhat hesitantly to be greeted by a smiling and kindly faced lady of about 40 years, who invited us in to see the collection inside. And such a collection! An interesting collection of old coins, unusual jewelry, clippings from the "Calico Print" a paper published in that locality in the 80s, queer little jugs and vases found in "China Town," old muzzle loading guns and many, many more things, to say nothing of the wonderful mineral exhibit, highly colored and beautiful stones from that locality and many other places.

We were taken into a small dark room and showed the most amazing and wonderful displays of color I have ever been privileged to see.

By means of an ultra violet light the most beautiful colors were shown in what was under an ordinary light a colorless and somewhat uninteresting stone.

We spent a wonderful two hours with the "Lady at Calico" and to all our foolish questions she gave gracious and intelligent answers. Inquiring as to where I might find some data concerning the history of Calico, I was shown a copy of the most interesting magazine I have ever read, dated May 1938. Well to make a long story short I read the Desert Magazine from cover to cover, then decided to write you.

Upon leaving Calico I was handed a card

with the simple inscription "Greeting from Calico, Lucille and Larry." We both join in saying "here's to Lucille and Larry." Long may they live to enjoy the beauties of the old camp they both love so dearly.

It will well be worth the time of any tourist to visit Calico.

NED AND MARY BRISTOE.

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Hayden, Arizona

Dear Sir:

I want to write a few words of appreciation for your magazine. I've been reading it now for several months and certainly enjoy it. It's in a class by itself.

I like all of the departments, especially the photographs, Desert Quiz, and Indian stories.

Among your high lights are the maps by Norton Allen. I hope you keep him busy. Those little maps seem to add personality or a sort of familiarity to the different sections mapped out. One of a section near here (Superior) was so natural it was just like being there.

I haven't time to write more at present but believe me when I say your magazine is "tops."

H. O. LEONARD.

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Hawthorne, N. J.

Dear Sir:

So far I am in possession of two copies of "The Desert." In my estimation, let me say, it's the most intriguing book I've ever received. Being a Scoutmaster you can imagine how educational it is for me. Although I haven't feasted my eyes on western sand, I can assure you the West and I are one, because as a boy I loved to read and re-read the thrilling stories of the gold seekers.

Some day, I hope, I will come to visit you folks out there, and experience the thrill of walking on the sand carpet, perhaps with, and under the supervision of a "Hilton or a Henderson?" I suspect Mr. Seabridge of California as the friend who introduced me to your publication. If my guess is right thank him many times for me. I expect to become a steady subscriber, and I thank you for your letter which capitalizes friendliness. Any information you may need concerning mineral localities, or minerals from eastern localities, you may have by asking. Good luck to you and regards to all my Desert friends. I am sincerely a Desert booster.

SCOUTMASTER EDW. WIRTZ.

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Painted Desert Hide-a-way
4 miles E. Winslow, Ariz.

Dear Mr. Henderson:

Referring to an article in the October issue of the Desert Magazine, entitled "Carnelian in the Saddle Mountains," of which John W. Hilton is the author, and in which he makes reference to a clam-shaped geode, and states: "They really are not the shape of clams."

Now I have one of these geodes in my possession and they are undoubtedly the shape of clams. When shown to eastern tourists who are familiar with clams, they invariably exclaim: "Why, that's a clam." I have also been told by people who have made extensive study of fossils, that they are undoubtedly fossil clams. I have also seen a number of these clams that have been found in this vicinity. I am also informed that there is on display at the museum at Grand Canyon, a petrified oyster shell, which opened very readily and had a petrified oyster inside.

If Mr. Hilton, or any of your staff, should be in this part of the state, I would like to have him stop in and see this clam, together with other fossils which might be interesting.

MRS. W. T. HUBBARD.

Twentynine Palms, California

Ed. Desert:

Will one of your readers, a real desert rat, please give me some information? I want to know if there is any better way to get rid of ants than by eating them. I don't mind eating them alive, but I don't like the looks very well. And a second question: After I have eaten a few thousands of them how much must I reduce the usual amount of carbohydrate, proteins, fats and sugars to have a balanced diet.

WM. M. CLARK.

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Salt Lake City, Utah

Dear Sir:

George Wharton James authored several books of his adventures in our great Southwest during the early days of its wilderness. Especially did he write well and knowingly of the Imperial Valley; its surrounding trails and canyons. The most conspicuous evidence of this latter is his two volumes entitled "Wonders of the Colorado Desert," Little, Brown, and Company 1906. These volumes are now off the market but by happy chance I was able to procure the set through the Thomas Nickerson Book Store, Honolulu, Hawaii, they in turn had to send to New York and have them shipped. Quite a worthy distance for such a worthy reading!

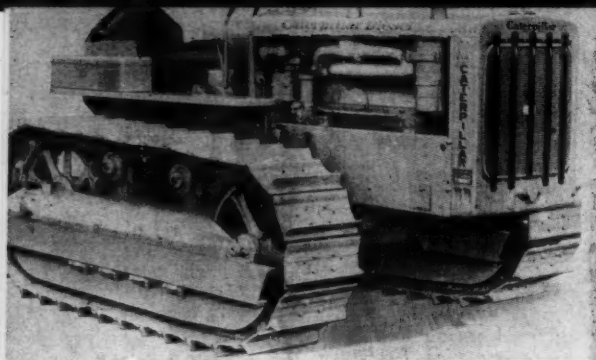
My principal aim in writing this letter is to express my opinion on books of the Desert, old and new, written with the purpose of portraying our southwestern Deserts; their unexplored secrets and their romance. I have mentioned Hornaday 1908, Lumholtz 1910, and North who published "Camp and Camino in Lower California" The Baker and Taylor Company, 1910. Lumholtz, "New Trails in Mexico" Charles Scribners Sons 1912, follows up where Hornaday left off in the exploration of the Papagueria South, and to the gulf from Pinacate. Arthur W. North the author of "Camp and Camino in Lower California" deals primarily with the native Mexico and its colorful history under the Spaniards in and around Baja California. Some excellent studies of petroglyphs also.

All of the above mentioned books are excellent reading and have a thoroughness that is surprisingly educative, even after 30 years. In my opinion the old authors with their personal views and picturesque manner have painted the best and most complete picture of our present day desert. Though they wrote from experiences up to 30 years or more ago, their writings are as accurate now as they were then. The desert doesn't change, not the real desert. Man may change its surface in a small way but never can he change the nature of it.

Now, by comparison I would like to throw Florida swamp mud on the efforts of the present day writers of our desert. There are no doubt a few authors who, if they wanted to, could turn out decent, interesting and trustworthy manuscripts on this subject. There is one I know of, a woman, Ann Axtel Morris. She is responsible for the earthy humor and really instructive "Digging in the Southwest." She stands alone as a really good desert writer of this age. The others? To me they have failed to turn out anything of particular worth. I shall give one point in favor, however; you can not expect them to compete with men of the intellect and education that produced the real desert reports of 30 years ago. Those men were adventurers and explorers in the true sense.

Closing I shall congratulate you upon another anniversary for the Desert Magazine. I enjoy it immensely.

TIM OILA.



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